



## **MEETING OF THE BOARD OF DIRECTORS**

### **AGENDA**

**February 9, 2017 6:00 PM**

**Materials Recovery Facility Administration Building  
3033 Fiddymment Road, Roseville, CA 95747**

Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection at the Clerk of the Board, 3033 Fiddymment Road, Roseville, CA 95747, during normal business hours and at the meeting location immediately before and during the meeting. The Western Placer Waste Management Authority is committed to ensuring that persons with disabilities are provided the resources to participate fully in its public meetings. If you are hearing impaired, we have listening devices available. If you require additional disability-related modifications or accommodations, including auxiliary aids or services, please contact the Clerk of the Board at (916) 543-3960. If requested, the agenda shall be provided in appropriate alternative formats to persons with disabilities. All requests must be in writing and must be received by the Clerk five business days prior to the scheduled meeting for which you are requesting accommodation. Requests received after such time will be accommodated if time permits.

1. Call Meeting to Order
2. Pledge of Allegiance (Director Weygandt)
3. Roll Call
4. Statement of Meeting Procedures (Clerk of the Board)
5. Agenda Approval
6. Public Comment

This is a time when persons may address the Board regarding items not on this Agenda. It is requested that comments be brief, since the Board is not permitted to take any action on items addressed under Public Comment.

7. Consent Agenda

- a. Project 02466 – Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction – Notice of Completion (Keith Schmidt) Pg. 3

Adopt Resolution 17-01 accepting Project 02466 – Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction as complete, and authorizing the Executive Director or designee to execute and file the attached Notice of Completion.

- b. Agreement for Reimbursement of Household Hazardous Waste Collection Program Costs between the WPWMA and the County of Sacramento (Eric Oddo) Pg. 11

Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign the Agreement between the WPWMA and the County of Sacramento that allows for use of each other's household hazardous waste (HHW) facilities by Placer and Sacramento County residents and establishes a mechanism for reimbursement to each other for costs incurred by providing these "out of county" resident services a cost not to exceed \$100,000 per year.

8. Announcements & Information

- |    |  |         |
|----|--|---------|
| a. | <u>Reports from Directors</u>  | ----    |
| b. | <u>Report from the Executive Director</u> (Ken Grehm)                              | ----    |
| c. | <u>Financial Reports</u> (Valerie Bayne)   | Pg. 27  |
| d. | <u>Monthly Tonnage Reports</u> (Keith Schmidt)                                     | ----    |
| e. | <u>Auditors Report</u> (Valerie Bayne)   | Pg. 31  |
| f. | <u>Quarterly MRF Operator's Report</u> (Nortech Waste)                             | Pg. 85  |
| g. | <u>Quarterly Landfill Operator's Report</u> (Nortech Landfill)                     | Pg. 91  |
| h. | <u>Quarterly WPWMA Engineer's Report</u> (Keith Schmidt)                           | Pg. 93  |
| i. | <u>2016 Auburn HHW Collection Event Summary</u> (Stephanie Ulmer)                  | Pg. 97  |
| j. | <u>Woody Biomass Gasification Feasibility Analysis</u> (Eric Oddo)                 | Pg. 99  |
| k. | <u>Letter from Nortech Waste, LLC. Re: Change in Circumstances</u> (Nortech Waste) | Pg. 139 |

9. Action Items


- |    |  |         |
|----|--|---------|
| a. | <u>Minutes of the Board Meeting held December 8, 2016</u><br>Approve as submitted.   | Pg. 145 |
| b. | <u>Conducting Solid Waste-Related Pilot Studies at the WPWMA's Facility</u> (Eric Oddo)<br><br>Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to: 1) enter into individual agreements with technology vendors or 2) provide the MRF or Landfill Operator with the necessary approval and authorization to engage with technology vendors for the purposes of conducting solid waste-related pilot studies at the WPWMA's facility. | Pg. 147 |
| c. | <u>Sole Source Agreement with CE Schmidt for Odor Related Measurement and Testing at the WPWMA's Facilities</u> (Eric Oddo)<br><br>Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign a sole-source agreement with CE Schmidt to conduct odor related measurement studies at the WPWMA's facilities for a cost not to exceed \$150,000   | Pg. 149 |

10. Upcoming Agenda Items

Identification of any items the Board would like staff to address at a future meeting.

11. Adjournment

**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**                      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM /KEITH SCHMIDT**   
SUBJECT: **PROJECT 02466 – MODULE 5 BASE LINER SYSTEM AND MODULE 15/16 PARTIAL FINAL COVER CONSTRUCTION: NOTICE OF COMPLETION**

**RECOMMENDED ACTION:**

Adopt Resolution 17-01 accepting Project 02466 – Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction as complete, and authorizing the Executive Director or designee to execute and file the attached Notice of Completion.

**BACKGROUND:**

On August 14, 2014, your Board authorized staff to solicit bids for the Module 5 Base Liner System Construction and Module 15/16 Partial Final Cover project and authorized the Executive Director to execute the resulting agreement. The Executive Director executed an agreement with R.J. Gordon Construction Inc. (RJG), of Pleasant Hills, CA in the amount of \$5,514,888.84 and staff issued a Notice to Proceed on November 7, 2014 and March 10, 2015 for the liner and cover projects, respectively. The project included installation of a double-composite base liner system and a single composite side-slope liner system in Module 5 to prepare for filling operations. The project also included construction of the partial final closure of Modules 15 and 16. The partial final cover system consisted of a geomembrane liner with integrated drainage installed over the completed south and southwest slopes of Modules 15 and 16, respectively and improved the WPWMA's ability to collection landfill gas from this area thereby reducing surface emissions and gas related odors.

Nine contract change orders (CCO) were issued during the project totaling \$816,244.77. A number of the change orders were for landfill gas system improvements which require the same work crews and expertise as elements of the liner project. Performing these improvements to the landfill gas system via change order allowed the WPWMA to improve gas system operations and recovery rates, and reduce the potential for odor complaints. A summary of the CCOs is included with the attached supplemental information sheet.

Construction of the project began on November 7, 2014. Module 5 Base Liner System was substantially completed on April 23, 2015 and Module 15/16 Partial Final Cover was substantially completed on July 1, 2015. Since that time there have been two potential warranty issues that delayed staff recommendation to issue the Notice of Completion: In December 2015 and again in August 2016, staff identified leachate seeping from the final cover area of landfill. On both occasions RJG was notified of the issue and mobilized to the site at which time they located defects in the partial final cover system geomembrane and repaired them. Since the repairs, the site has experienced substantial rainfall and no additional leaks have been detected. As such, staff is confident there are no other similar issues and recommends issuing the attached Notice of Completion.

**ENVIRONMENTAL CLEARANCE:**

An Environmental Impact Report (EIR) for the Western Regional Sanitary Landfill, including base liner and final cover projects, was certified by your Board in August of 1996. A Supplemental EIR addressing the impacts of increased landfill heights was certified by your Board in August of 2000. No further environmental review is required.

**FISCAL IMPACT:**

The total construction budget for the project was \$6,766,000. The final construction cost, inclusive of CCOs, was \$6,331,133.61. Of the \$816,244.77 in CCOs, approximately 53% of that total (\$430,830.93) was directly related to modification or improvement of the landfill gas system. This was an anticipated expense and included in Account 2549 "Construction Projects" of the FY 2016/17 Budget.

ATTACHMENT: RESOLUTION 17-01

**Before the Board of Directors  
Western Placer Waste Management Authority**

Resolution No. 17-01

In the matter of:

**A RESOLUTION ACCEPTING PROJECT 02466,  
MODULE 5 BASE LINER SYSTEM AND MODULE 15/16  
PARTIAL FINAL COVER CONSTRUCTION, AS COMPLETE.**

The following **RESOLUTION** was duly passed by the Board of Directors of the Western Placer Waste Management Authority at a regular meeting held February 9, 2017, by the following vote on roll call:

Ayes:

Noes:

Absent:

Signed and approved by me after its passage:

\_\_\_\_\_  
Chair, Western Placer Waste  
Management Authority Board

Attest:  
Clerk of said Board

\_\_\_\_\_

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**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Western Placer Waste Management Authority, that this Board finds all work associated with the project entitled "Project 02466 - Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction" complete. Furthermore, the Executive Director or designee is hereby authorized to execute a Notice of Completion for this project on behalf of the Western Placer Waste Management Authority.

ATTACHMENTS: NOTICE OF COMPLETION  
SUPPLEMENTAL INFORMATION SHEET

Recording requested by: Western Placer Waste Management Authority  
When recorded return to: Western Placer Waste Management Authority  
Attn: Heather Wilden, Clerk of the Board  
11476 C Ave. Auburn, CA 95603

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**NOTICE OF COMPLETION  
(RES. NO. 17-01)**

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**Project Name:** Module 5 Base Liner System and Module 15/16 Partial Final Cover  
Construction, Project 02466.

**NOTICE IS HEREBY GIVEN**, pursuant to California Civil Code Section 3093, that the following Contractor, to wit:

**R.J. Gordon Construction Inc.  
P.O. Box 23204  
Pleasant Hill, CA 94523**

performed and completed, for the Western Placer Waste Management Authority, County of Placer, State of California, the following contract, structure or work of improvement, to wit:

**Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction,  
Project 02466  
Roseville, CA**

The property is owned by the Western Placer Waste Management Authority in fee. Said work was accepted on February 9, 2017.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 2017, at Auburn, California. I declare under penalty of perjury that the foregoing is true and correct.

\_\_\_\_\_  
KEN GREHM, EXECUTIVE DIRECTOR  
WESTERN PLACER WASTE  
MANAGEMENT AUTHORITY

**STATE OF CALIFORNIA    )<sub>ss</sub>**  
**COUNTY OF PLACER        )**

On \_\_\_\_\_ before me \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

## **NOTICE OF COMPLETION SUPPLEMENTAL INFORMATION SHEET**

DATE: February 09, 2017

PROJECT: 02466

PROJECT NAME: Module 5 Base Liner System and Module 15/16 Partial Final Cover Construction

CONTRACTOR: R.J. Gordon Construction Inc.

### **SUMMARY OF EXPENDITURES**

ORIGINAL CONTRACT AMOUNT	\$ 5,514,888.84
ADDITIVE CHANGE ORDERS	\$ 816,244.77
DEDUCTIVE CHANGE ORDERS	\$ -
TOTAL CONTRACT EXPENDITURES	<b>\$ 6,331,133.61</b>

### **SUMMARY OF CHANGE ORDERS**

CCO #	Task Description	Total
1	Additional material and shipping costs to install 60-mil geosynthetic final cover system instead of 40-mil. Change required by Central Valley Regional Water Quality Control Board (CVRWQB).	\$ 38,772.00
2	Furnish and install an extension to the Module 13 Leachate Control and Recovery System (LCRS) at the Module 5 border. Install a 2" LCRS flow test pipe, change required by the CVRWQB.	\$ 15,000.00

CCO #	Task Description	Total
3	Remove silt and debris that washed into the Module 5 Project Area. Install earth swale upstream of Project Area to divert storm water to an existing sedimentation basin. Provide additional Stormwater Pollution Prevention Plan (SWPPP) Implementation. Install temporary plastic dam adjacent to the landfill module to allow construction of Module 5 to continue without risk of spilling contaminated water (leachate) into the Project Area. Changes requested by the WPWMA for continued compliance with stormwater regulations.	\$ 138,110.84
4	Provide labor and equipment to assist the WPWMA to remove leachate/condensate from the gas system piping and relocate header pipes. Furnish and install approximately 1,050 lineal feet of shallow landfill gas collector underneath Module 15/16 Partial Final Cover System. Furnish and install a condensate sump pump and pumping system. Changes requested by the WPWMA to improve landfill gas system operations.	\$ 135,925.96
5	Provide labor and equipment to assist the WPWMA pump leachate/condensate and relocate and reconnect header pipes as needed for improved operation and compliance. Furnish and install an approximately 800 lineal feet long drain system beneath the geocomposite final cover system on Module 16. Furnish and install an electric leachate sump pump for the Module 5 leachate sump and extend discharge and compressed air pipelines. Furnish and install battery operated, magnetic flow meters at seven landfill module sumps. Flow meter change required by CVRWQB (\$39,165). Remaining changes requested by the WPWMA to improve landfill gas system operations.	\$ 184,678.00
6	Extend 12" landfill gas header approximately 2,020 lineal feet to improve landfill gas system operation and reduce downtime. Furnish and install a relocatable condensate sump and pumping system in NE corner of Module 5. Remove approximately 100 lineal feet section of temporary 12" landfill gas header pipe and associated road crossing in Module 14 and replace with an 8" pipe. Changes requested by the WPWMA to improve landfill gas system operations.	\$ 197,348.00



CCO #	Task Description	Total
7	Add 3 tees to serve as additional connection points in the 12" landfill gas header that extends from Module 16 to Module 5. Provide additional sampling, site inspection, and reporting as required by the State for the SWPPP Implementation task. Shutdown and tie into the existing 8" landfill gas header on the Module 16 side slope, establish a gas connection to the LCRS riser pipeline, install dry well within the landfill at the north end of the cover system. Changes requested by the WPWMA to improve landfill gas system operations and for continued compliance with stormwater regulations.	\$ 23,293.18
8	Extend landfill gas collection system piping to allow waste filling operations to begin on the eastern side of Module 5. Furnish and install four revised pipeline alignments on Modules 14, 15, and 16 using some existing onsite piping. Changes requested by the WPWMA to improve landfill gas system operations.	\$ 71,550.00
9	Provide labor and equipment to expose, cut away, and properly abandon landfill gas well HZ-107, to weld LLDPE cap in that area of Mod 16 LLDPE cover system, and to perform 2 days of landfill gas collection system piping modifications to improve gas flow.	\$ 11,566.79
	<b>Total</b>	\$ 816,244.77

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**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**                      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM / ERIC ODDO**   
SUBJECT: **AGREEMENT FOR REIMBURSEMENT OF HOUSEHOLD HAZARDOUS  
WASTE FACILITY PROGRAM COSTS BETWEEN THE WPWMA AND  
THE COUNTY OF SACRAMENTO**

**RECOMMENDED ACTION:**

Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign the Agreement between the WPWMA and the County of Sacramento that allows for use of each other's household hazardous waste (HHW) facilities by Placer and Sacramento County residents and establishes a mechanism for reimbursement to each other for costs incurred by providing these "out of county" resident services at a cost not to exceed \$100,000 per year.

**BACKGROUND:**

Both the WPWMA and the County of Sacramento own and operate permanent HHW facilities for use by their respective customer bases. Over time, however, some residents from Placer County have opted to use the County of Sacramento's facilities while at the same time some Sacramento residents have utilized the WPWMA's facility.

While each entity encourages residents to utilize the facility associated with their county of residence, it may often be more convenient for some residents to use the other agency's facility. As it is in the best interest of both agencies to insure that HHW is properly managed while ensuring that its customers are not subsidizing the use of their respective facilities by "out of county" customers, WPWMA and County of Sacramento staff negotiated an Agreement to address these issues (attached). The proposed Agreement allows for continued use of the facilities by each other's customers and includes a mechanism to reimburse the other for administrative, labor and recycling/disposal costs associated with servicing these "out of county" customers. The County of Sacramento has successfully used this inter-agency reimbursement agreement model with other cities in the greater Sacramento area.

Based on historical usage patterns at both facilities, the WPWMA may incur additional monthly costs of approximately \$1,000 per month. Although this would suggest potential annual costs significantly lower than the proposed annual cap of \$100,000, WPWMA and County of Sacramento staff agreed to set a higher than expected annual reimbursement cap to accommodate possible future use fluctuations and avoid excessive administration costs associated with periodic amendments to the Agreement to adjust the funding cap. In the event that costs approach the annual spending cap, staff will return to your Board with recommendations on possible ways to mitigate these costs.

**ENVIRONMENTAL CLEARANCE:**

The recommended action is categorically exempt from further environmental review pursuant to Section 15301 "Existing Facilities" of the CEQA guidelines which provides for operation, repair, maintenance, permitting and minor alteration of existing public structures.

**FISCAL IMPACT:**

The maximum annual cost of the proposed Agreement is \$100,000 although staff believes the actual cost, based on historic trends, will be approximately \$12,000 per year. Sufficient funding is included in Account 2840 "Special Department Expense" of the FY 2016/17 Budget to cover this cost.

ATTACHMENT: AGREEMENT WITH THE COUNTY OF SACRAMENTO

**COUNTY OF SACRAMENTO  
MUNICIPAL SERVICES**

**AGREEMENT FOR REIMBURSEMENT OF HOUSEHOLD  
HAZARDOUS WASTE COLLECTION PROGRAM COSTS BETWEEN  
THE COUNTY OF SACRAMENTO AND THE WESTERN PLACER WASTE  
MANAGEMENT AUTHORITY**

THIS AGREEMENT is made and entered into on \_\_\_\_\_, by and between the COUNTY OF SACRAMENTO, a political subdivision of the State of California, hereinafter referred to as "COUNTY," and the WESTERN PLACER WASTE MANAGEMENT AUTHORITY, a local agency, organized under the laws of the State of California, hereinafter referred to as "AUTHORITY".

**RECITALS**

WHEREAS, COUNTY owns and operates a permitted permanent household hazardous waste collection facility located at the COUNTY'S North Area Recovery Station, 4450 Roseville Road, North Highlands, California (hereinafter referred to as "NARS PHHWCF"); and

WHEREAS, COUNTY owns and operates a permitted Antifreeze, Batteries, Oil, and Paint ("ABOP") Collection Facility located at the COUNTY'S Kiefer Landfill, 12701 Kiefer Boulevard, Sloughhouse, California (hereinafter referred to as "Kiefer ABOPF"); and

WHEREAS, AUTHORITY owns and operates a permitted permanent household hazardous waste collection facility located at the AUTHORITY'S Materials Recovery Facility, 3033 Fiddymont Road, Roseville, California (hereinafter referred to as "WPWMA PHHWCF"); and

WHEREAS, COUNTY AND AUTHORITY desire to cooperate in utilizing the collection facilities to provide convenient access to COUNTY and AUTHORITY residents for their disposal of household hazardous waste, and to reimburse each other for the costs incurred therewith.

NOW, THEREFORE, in consideration of the promises herein made, the parties hereto agree as follows:

**1. DEFINITIONS**

- A. "AUTHORITY Director" shall mean the Executive Director for AUTHORITY or his/her designee.
- B. "Conditionally Exempt Small Quantity Generator" (hereinafter referred to as "CESQ generator") means a business concern which meets the criteria specified in Section 261.5 of Title 40 of the Code of Federal Regulations.

- C. "COUNTY Director" shall mean the Director of the Department of Waste Management and Recycling for COUNTY or his/her designee.
- D. "Hazardous Waste" means any waste which meets the definitions set forth in section 66261.3 of Title 22 of the California Code of Regulations and is required to be managed.
- E. "Household Hazardous Waste" (hereinafter referred to as "HHW") means any hazardous waste generated incidental to owning or maintaining a place of residence, but does not include any waste generated in the course of operating a business concern at a residence. (California Health and Safety Code §25218(1)e).
- F. "Residential Generator" means a Placer County resident of the AUTHORITY's service area or a resident of the unincorporated area of the COUNTY seeking to dispose of HHW.

**2. SCOPE OF SERVICES AND COMPENSATION**

- A. COUNTY and AUTHORITY shall provide services in the amount, type and manner, and for the compensation described in Exhibit A, "Scope of Services and Compensation" and Exhibit B, Unit Pricing Table, which are attached hereto and incorporated herein.
- B. COUNTY Director and AUTHORITY Director are authorized to amend this Agreement to make pricing changes to Exhibit B, attached hereto and incorporated herein, during the term and any extension of the Agreement.

**3. TERM**

- A. This Agreement shall be effective and commence as of the date first written above and shall remain in effect until June 30, 2020.
- B. COUNTY Director and AUTHORITY Director are authorized to amend this Agreement to extend the term for up to four (4) additional one year terms upon mutual written consent of the COUNTY Director and AUTHORITY Director.

**4. NOTICE**

Any notice, demand, request, consent, or approval that either party hereto may or is required to give the other pursuant to this Agreement shall be in writing and shall be either personally delivered or sent by mail, addressed as follows:

TO COUNTY:

Department of Waste Management  
and Recycling  
9850 Goethe Road  
Sacramento, CA 95827  
Attn: Doug Sloan

TO AUTHORITY:

Western Placer Waste Management  
Authority  
11476 C Avenue  
Auburn, CA 95603  
Attn: WPWMA Executive Director

Either party may change the address to which subsequent notice and/or other communications can be sent by giving written notice designating a change of address to the other party, which shall be effective upon receipt.

**5. INVOICE AND PAYMENTS**

A. Invoice. The parties shall submit invoices to the other no later than thirty (30) days following the monthly invoice period. Invoice shall be mailed or delivered to the parties as provided in Section 4 (Notice) above, and shall include the following information:

1. Contract Number: 81441
2. Project Name: HHW Overage Reimbursement
3. Date of invoice submission
4. Services provided and respective reimbursement requested
5. Any other information deemed necessary by the parties

B. Payments. The parties shall provide reimbursement payment, if any, within 30 days of receipt of invoice(s) and shall remit payment to the address provided in Section 4 (Notice) above.

**6. COMPLIANCE WITH LAWS**

COUNTY and AUTHORITY shall observe and comply with all applicable Federal, State, and local law, regulations and ordinances.

**7. GOVERNING LAWS AND JURISDICTION**

This Agreement shall be deemed to have been executed and to be performed within the State of California and shall be construed and governed by the internal laws of the State of California. Any legal proceedings arising out of or relating to this Agreement shall be brought in Sacramento County, California.

**8. STATUS OF PARTIES**

There is no agency relationship between the parties. Notwithstanding anything contained herein, the employees of each party will continue to be entirely and exclusively under the direction, supervision and control of the employing party.

**9. INDEMNIFICATION**

A. AUTHORITY shall defend, indemnify and hold harmless COUNTY, its Board of Supervisors, officers, directors, agents, employees and volunteers from and against all demands, claims, actions, liabilities, losses, damages, and costs, including reasonable attorneys' fees, arising out of or resulting from the performance of the Agreement, caused in whole or in part by the negligent or intentional acts or omissions of AUTHORITY'S officers, directors, agents, employees, or subcontractors.

B. COUNTY shall defend, indemnify, and hold harmless AUTHORITY, its officers, directors, agents, employees, and subcontractors from and

against all demands, claims, actions, liabilities, losses, damages and costs, including reasonable attorneys' fees, arising out of or resulting from the performance of the Agreement, caused in whole or in part by the negligent or intentional acts or omissions of COUNTY'S Board of Supervisors, officers, directors, agents, employees, volunteers, or subcontractors.

- C. It is the intention of COUNTY and AUTHORITY that the provisions of Section 9 be interpreted to impose on each party responsibility to the other for the acts and omissions of their respective officers, directors, agents, employees, volunteers, COUNTY'S Board of Supervisors, and AUTHORITY'S subcontractors. It is also the intention of COUNTY and AUTHORITY that, where comparative fault is determined to have been contributory, principles of comparative fault will be followed and each party shall bear the proportionate cost of any damage attributable to the fault of that party, its officers, directors, agents, employees, volunteers, COUNTY'S Board of Supervisors and AUTHORITY'S subcontractors.

This indemnity obligation shall not be limited by the types and amounts of insurance or self-insurance maintained by the parties.

Nothing in this indemnity obligation shall be construed to create any duty to, any standard of care with reference to, or any liability or obligation, contractual or otherwise, to any third party.

The provisions of this indemnity shall survive the expiration or termination of the Agreement.

**10. INSURANCE**

Each party, at its sole cost and expense, shall carry insurance or self-insure its activities in connection with this Agreement, and obtain, keep in force and maintain, insurance or equivalent programs of self-insurance, for general liability, workers compensation, and business automobile liability adequate to cover its potential liabilities hereunder. Each party agrees to provide the other thirty (30) days' advance written notice of any cancellation, termination or lapse of any of the insurance or self-insurance coverage applicable to this Agreement.

**11. ASSIGNMENT**

This Agreement is not assignable by AUTHORITY or COUNTY in whole or in part.

**12. AMENDMENT AND WAIVER**

Except as provided herein, no alteration, amendment, variation, or waiver of the terms of this Agreement shall be valid unless made in writing and signed by both parties. Waiver by either party of any default, breach or condition precedent shall not be construed as a waiver of any other default, breach or condition precedent, or any other right hereunder. No interpretation of any provision of this Agreement



shall be binding upon COUNTY or AUTHORITY unless agreed in writing by counsel for COUNTY and COUNTY'S Director, and AUTHORITY'S Director and attorney for AUTHORITY.

**13. SUCCESSORS**

This Agreement shall bind the successors of COUNTY and AUTHORITY in the same manner as if they were expressly named.

**14. TIME**

Time is of the essence of this Agreement.

**15. INTERPRETATION**

This Agreement shall be deemed to have been prepared equally by both of the parties, and the Agreement and its individual provisions shall not be construed or interpreted more favorably for one party on the basis that the other party prepared it.

**16. DISPUTES**

In the event of any dispute arising out of or relating to this Agreement, the parties shall attempt, in good faith, to promptly resolve the dispute mutually between them. If the dispute cannot be resolved by mutual agreement, nothing herein shall preclude either party's right to pursue remedy or relief by civil litigation, pursuant to the laws of the State of California.

**17. TERMINATION**

- A. Except as provided in Section 17.C. below, COUNTY may terminate this Agreement without cause upon thirty (30) days written notice to the AUTHORITY. Notice shall be deemed served on the date of mailing.
- B. Except as provided in Section 17.D. below, AUTHORITY may terminate this Agreement without cause upon thirty (30) days written notice to the COUNTY. Notice shall be deemed served on the date of mailing.
- C. COUNTY may terminate this Agreement immediately upon giving written notice to AUTHORITY, 1) if advised that funds are not available from external sources for this Agreement or for any portion thereof; 2) if funds in COUNTY'S yearly proposed and final budget are not appropriated by COUNTY for this Agreement or any portion thereof; or 3) if funds that were previously appropriated for this Agreement are reduced, eliminated, and/or re-allocated by County as a result of mid-year budget reductions.
- D. AUTHORITY may terminate this Agreement immediately upon giving written notice to COUNTY, 1) if advised that funds are not available from external sources for this Agreement or for any portion thereof; 2) if funds in AUTHORITY'S yearly proposed and final budget are not appropriated by AUTHORITY for this Agreement or any portion thereof; or 3) if funds that were previously appropriated for this Agreement are reduced, eliminated, and/or re-allocated by AUTHORITY as a result of mid-year budget reductions.

- E. If this Agreement is terminated, the parties shall satisfy any outstanding repayment obligations owed to each other pursuant to the repayment terms of Exhibit A, incurred up to and including the date of termination.

**18. PRIOR AGREEMENTS**

This Agreement constitutes the entire contract between COUNTY and AUTHORITY regarding the subject matter of this Agreement. Any prior agreements, whether oral or written, between COUNTY and AUTHORITY regarding the subject matter of this Agreement are hereby terminated effective immediately upon full execution of this Agreement.

**19. AUTHORITY TO EXECUTE**

Each person executing this Agreement represents and warrants that he or she is duly authorized and has legal authority to execute and deliver this Agreement for or on behalf of the parties to this Agreement. Each party represents and warrants to the other that the execution and delivery of the Agreement and the performance of such party's obligations hereunder have been duly authorized.

**20. COUNTERPARTS**

This Agreement may be executed in counterparts. The Agreement shall be deemed executed when it has been signed by both parties.

**(SIGNATURE PAGE FOLLOWS)**

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first written above.

**COUNTY OF SACRAMENTO**, a political  
subdivision of the State of California

**WESTERN PLACER WASTE  
MANAGEMENT AUTHORITY**, a local  
agency

By: \_\_\_\_\_  
Paul Philleo, Director  
Department of Waste Management  
and Recycling  
Municipal Services

By: \_\_\_\_\_  
Ken Grehm, Executive Director

Date: \_\_\_\_\_

“COUNTY”

Approved as to Form:

Date: \_\_\_\_\_

By: \_\_\_\_\_  
Robert Sandman, Authority Counsel

Date: \_\_\_\_\_

Agreement approved by  
Board of Supervisors:

Agenda Date: \_\_\_\_\_

Item Number: \_\_\_\_\_

Resolution Number: \_\_\_\_\_

Contract Reviewed and Approved by County Counsel

By: \_\_\_\_\_  
Diane McElhern  
Deputy County Counsel

Date: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Mike Miller, Administrative Services Officer II  
Contract Services Section/Contract & Purchasing Services Division  
Department of General Services  
Phone: (916) 874-7034

## EXHIBIT A

### **SCOPE OF SERVICES AND COMPENSATION**

#### **1. AUTHORITY RESPONSIBILITIES**

- A. Subject to the limitations provided in Section 2.C. below, AUTHORITY shall accept self-hauled HHW from residents of the unincorporated areas of the COUNTY at no charge to the resident, and Hazardous Waste from CESQ generators located in the unincorporated areas of the COUNTY at WPWMA PHHWCF, during its regular days and hours of operation. The days and hours of operation are subject to change at the will of the AUTHORITY with written notice to COUNTY:
- i. Residential Generators: HHW will be accepted at the WPWMA PHHWCF with no appointment required.
  - ii. CESQ Generators: CESQ generators must first call the AUTHORITY to make an appointment to self-haul Hazardous Waste to the WPWMA PHHWCF. No Hazardous Waste will be accepted from a CESQ generator without an appointment. AUTHORITY will charge any CESQ generator from the unincorporated areas of the COUNTY for use of the WPWMA PHHWCF the same amount for the same materials and quantities that the AUTHORITY charges CESQ generators from the AUTHORITY's service area. Payment will be required prior to a CESQ generator gaining access to the WPWMA PHHWCF.
- B. AUTHORITY may direct residents from within the AUTHORITY's service area to self-haul HHW, and CESQ generators from within the AUTHORITY's service area to self-haul Hazardous Waste to NARS PHHWCF or to Kiefer ABOPF. Any public education or promotional efforts developed by AUTHORITY shall indicate the specific days and hours of operation of the NARS PHHWCF and Kiefer ABOPF.
- C. AUTHORITY acknowledges that the NARS PHHWCF does not accept all types and quantities of residential HHW and CESQ Hazardous Waste. Prohibited materials include, but are not limited to: radioactive materials, railroad ties or treated wood, explosives (road flares are acceptable), and medical waste (home generated needles or syringes are acceptable). Ammunition will only be accepted on a case-by-case basis with prior notification. Quantity limits per trip are currently as follows but are subject to change at the will of COUNTY with written notice to the AUTHORITY: Quantity limits for residential HHW are 15 gallons (liquid) or 125 pounds (solid) per vehicle trip. Quantity limits for CESQ Hazardous Waste are 27 gallons (liquid) or 220 pounds (solid) per vehicle trip. No containers larger than 5 gallons are accepted. Further, AUTHORITY acknowledges

that COUNTY will only accept antifreeze, auto and household batteries, motor and cooking oil, motor oil filters, latex and oil based paint, and universal waste at the Kiefer ABOPF. Quantity limits as described herein apply to those materials acceptable at the Kiefer ABOPF.

- D. In the event COUNTY constructs, owns, and operates a permanent household hazardous waste collection facility at Kiefer during the term of this agreement, then all acceptable materials and limits thereto as reflected in section 1.C. above for the NARS PHHWCF shall apply.

## **2. COUNTY RESPONSIBILITIES**

- A. Subject to the limitations provided in Section 1.C. above, COUNTY shall accept self-hauled HHW from residents from within the AUTHORITY's service area at no charge to the resident and Hazardous Waste from CESQ generators located within the AUTHORITY's service area at NARS PHHWCF and at Kiefer ABOPF during the regular days and hours of operation. The days and hours of operation of the NARS PHHWCF and Kiefer ABOPF are subject to change at the will of COUNTY with written notice to AUTHORITY:
- i. Residential Generators: HHW will be accepted at the NARS PHHWCF, and antifreeze, batteries, motor and cooking oil, motor oil filters, latex and oil based paint, and universal waste will be accepted at the Kiefer ABOPF with no appointment required.
  - ii. CESQ Generators: CESQ generators must call the COUNTY to make an appointment to self-haul Hazardous Waste to NARS PHHWCF or to Kiefer ABOPF. No material will be accepted from a CESQ generator without an appointment. Appointments are scheduled on Wednesdays between 8:00 a.m. and 12:00 p.m. at both the NARS PHHWCF and the Kiefer ABOPF. COUNTY shall charge any CESQ generator from the AUTHORITY's service area for use of the NARS PHHWCF or Kiefer ABOPF the same amount for the same materials and quantities as COUNTY charges CESQ generators from the unincorporated areas of the COUNTY. Payment will be required prior to CESQ generator gaining access to the NARS PHHWCF or Kiefer ABOPF.
- B. COUNTY may direct residents and CESQ generators in the unincorporated areas of the COUNTY to self-haul HHW or Hazardous Waste to the WPWMA PHHWCF. Any public education or promotional efforts developed by COUNTY shall indicate the specific days and hours of operation of the WPWMA PHHWCF.
- C. COUNTY acknowledges that the WPWMA PHHWCF does not accept all types and quantities of residential HHW and CESQ Hazardous Waste.

Prohibited materials include, but are not limited to: radioactive materials, compressed gas cylinders over 20 pounds, explosives (road flares are acceptable), and medical waste (home generated needles, syringes, and expired medications are acceptable). Quantity limits per trip are currently as follows but are subject to change at the will of AUTHORITY with written notice to the COUNTY: Quantity limits for residential HHW are 15 gallons (liquid) or 125 pounds (solid) per vehicle trip. Quantity limits for CESQG Hazardous Waste are 27 gallons (liquid) or 220 pounds (solid) per vehicle trip. No containers larger than 5 gallons are accepted.

### **3. REIMBURSEMENT**

- A. COUNTY AND AUTHORITY shall reimburse each other for the use of their respective facilities by Residential Generators as provided in this section.
- B. Address Verification by COUNTY: COUNTY shall maintain a record of the zip code and address of each self-hauled HHW vehicle load received at either the Kiefer ABOPF or the NARS PHHWCF relative to the jurisdiction of waste origin. COUNTY shall verify all addresses through GIS applications to determine whether a certain address for a self-hauled HHW vehicle load is physically located within the AUTHORITY's service area.
- C. Address Verification by AUTHORITY: AUTHORITY shall maintain a record of the zip code and address of each self-hauled HHW vehicle load received at the WPWMA PHHWCF relative to the jurisdiction of waste origin. AUTHORITY shall verify all addresses through GIS applications to determine whether a certain address for a self-hauled HHW vehicle load is physically located within the unincorporated areas of the COUNTY.
- D. COUNTY and AUTHORITY shall, on a monthly basis, report to each other the total number of self-hauled HHW vehicle loads received by each at the respective facilities from residents within the other party's jurisdictional limits. Based on that reporting, a monthly reconciliation shall be performed by COUNTY to determine if any reimbursement payment is due. No reimbursement payment is due if the total number of self-hauled HHW vehicle loads WPWMA PHHWCF receives from residents of the unincorporated areas of the COUNTY is equal to the total number of self-hauled HHW vehicle loads NARS PHHWCF and Kiefer ABOPF receive from residents located within the AUTHORITY's service area. If the number of self-hauled HHW vehicle loads reported by the COUNTY is not equal to the number of self-hauled HHW vehicle loads reported by the AUTHORITY, a reimbursement payment will be required.

1. If the number of self-hauled HHW vehicle loads WPWMA PHHWCF receives from residents of the unincorporated areas of the COUNTY exceeds the number of self-hauled HHW vehicle loads the COUNTY'S Kiefer ABOPF and/or NARS PHHWCF receives from residents located within the AUTHORITY's service area, then the COUNTY pays the AUTHORITY.
  2. If the number of self-hauled HHW vehicle loads the COUNTY'S Kiefer ABOPF and/or NARS PHHWCF receives from residents located within the AUTHORITY's service area exceeds the number of self-hauled HHW vehicle loads the WPWMA PHHWCF receives from residents of the unincorporated areas of the COUNTY, then the AUTHORITY pays the COUNTY.
- E. If a reimbursement payment is required, it will be determined using the COUNTY's Household Hazardous Waste data collection application (SacHazTracker) as follows.
1. The amount of reimbursement shall be calculated by the COUNTY, subject to AUTHORITY's verification, by the 15<sup>th</sup> of the month following the end of each month. The COUNTY will provide the AUTHORITY with the monthly excel spreadsheet generated from SacHazTracker to support its calculation. Reimbursement shall occur for each self-hauled HHW vehicle load received at a party's facility during the month that is in excess of the self-hauled HHW vehicle loads received at the other party's facility during the same month.
    - i. Each self-hauled HHW vehicle load will include an HHW Admin Fee and Per Item Fees. The Per Item Fees are based on the type and quantity of material delivered in each self-hauled HHW vehicle load. The HHW Admin Fee and Per Item Fees shown in Exhibit B – COUNTY shall be established each year and shall take effect July 1. The HHW Admin Fee and Per Item Fees shall be calculated using the prior year (April 1 to March 31) actual costs incurred such as labor, materials, transportation and disposal. COUNTY shall notify AUTHORITY in writing by May 1 of each year of any change in fees and provide AUTHORITY with a revised Exhibit B – COUNTY.

- ii. The reimbursement payment for either the AUTHORITY or COUNTY will be calculated each month using jurisdictional specific self-hauled HHW vehicle load count data from SacHazTracker and pricing consistent with Exhibit B – COUNTY. The COUNTY will calculate the total HHW fees (Per Item Fees plus the HHW Admin Fee) for that jurisdiction for each self-hauled HHW vehicle load each month. The COUNTY will divide the total HHW fees by the total number of self-hauled HHW vehicle loads received from that jurisdiction at the COUNTY's facilities to determine the average cost per self-hauled HHW vehicle load for that month.

The average cost per self-hauled HHW vehicle load (as calculated by the COUNTY) will be applied to each excess self-hauled HHW vehicle load (as reported by the COUNTY and AUTHORITY) for that month. An example of this calculation is shown below.

Example: April 2016

The total number of excess self-hauled HHW vehicle loads will be determined using self-hauled HHW vehicle load count data reported by the COUNTY and AUTHORITY:

Authority Residents Using NARS PHHWCF/ Kiefer ABOPF (Reported by COUNTY)	County Residents Using WPWMA PHHWCF (Reported by AUTHORITY) *hypothetical*	Difference
23	5	18

The average cost per self-hauled HHW vehicle load will be determined using data from SacHazTracker.

For the month of April, the COUNTY records indicated a total of 857 self-hauled HHW vehicle loads attributed to COUNTY residents received at NARS PHHWCF and Kiefer ABOPF for a total cost of \$34,051.92. Alternatively, the COUNTY had a total of 23 self-hauled HHW vehicle loads attributed to residents from within the AUTHORITY's service area received at COUNTY facilities for a total cost of \$1,099.20. The average cost of a load is calculated by total loads divided by total costs which results in a per load calculation of \$39.73 and \$47.79 for the COUNTY and AUTHORITY, respectively. In this example, the amount owed would be calculated based on multiplying \$47.79 by the 18 loads (difference) so the AUTHORITY in this case would owe the COUNTY \$860.22.



	<b>Total AUTHORITY loads to COUNTY facilities</b>	<b>Total COUNTY unincorporated loads to COUNTY facilities</b>
Total Self-Hauled HHW Vehicle Loads	23	857
Total HHW Fees	\$ 1,099.20	\$ 34,051.92
Average Cost/Load	\$ 47.79	\$ 39.73

Therefore, for the month of April, the AUTHORITY would pay the COUNTY the following reimbursement payment:

$$\$47.79 \text{ (avg cost per load)} \times 18 \text{ (total \# of excess loads)} = \$860.22$$

- F. The maximum reimbursement amount to be paid by COUNTY to AUTHORITY under this Agreement shall not exceed One Hundred Thousand Dollars (\$100,000.00) on an annual basis.
- G. The maximum reimbursement amount to be paid by AUTHORITY to COUNTY under this Agreement shall not exceed One Hundred Thousand Dollars (\$100,000.00) on an annual basis

**EXHIBIT B to Agreement**  
**between the COUNTY OF SACRAMENTO and the**  
**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

**Unit Pricing Table**  
(Effective March 1, 2017)

<b>Household Hazardous Waste</b>			
<b>Description</b>	<b>Unit Price</b>	<b>Description</b>	<b>Unit Price</b>
Acids (gal)	\$ 21.90 /gal	Latex Paint - Unlabeled or Leaking, Non-Program Product (gal)	\$ 2.97 /gal
Acids (lb)	\$ 2.58 /lb	Mercury (lb)	\$ 2.75 /lb
Antifreeze (gal)	\$ 1.40 /gal	Motor Oil (gal)	\$ 0.78 /gal
Caustics (gal)	\$ 16.14 /gal	Non-RCRA Waste - Liquids (gal)	\$ 1.64 /gal
Caustics (lb)	\$ 1.90 /lb	Non-RCRA Waste - Solids (lb)	\$ 1.43 /lb
Fire Extinguishers - Empty (each)	\$ 0.77 /ea	Oil Filters (each)	\$ 0.72 /ea
Fire Extinguishers - Not Empty (each)	\$ 3.47 /ea	Oxidizers (gal)	\$ 25.35 /gal
Flammable Liquids - Non-pourable (gal)	\$ 9.53 /gal	Oxidizers (lb)	\$ 2.98 /lb
Flammable Liquids - Pourable (gal)	\$ 4.11 /gal	Poison - Liquids (gal)	\$ 21.31 /gal
Flammable Paint - Program Product (gal)	\$ 0.77 /gal	Poison - Solids (lb)	\$ 2.51 /lb
Flammable Paint - Unlabeled or Leaking, Non-Program Product (gal)	\$ 4.11 /gal	Propane (1 gal)	\$ 1.19 /ea
Flammable Solids (lb)	\$ 9.98 /lb	Propane (5 gal)	\$ 1.16 /ea
Latex Paint - Program Product (gal)	\$ 0.31 /gal		
<b>Universal Waste</b>			
<b>Description</b>	<b>Unit Price</b>	<b>Description</b>	<b>Unit Price</b>
Aerosols (each)	\$ 1.70 /ea	Fluorescent Tubes 4 ft. (each)	\$ 1.37 /ea
Auto Batteries (each)	\$ (5.11) /ea	Fluorescent Tubes 8 ft. (each)	\$ 2.55 /ea
Compact Fluorescent, Metal Halide, Sodium Vapor, Halogen, & LED Lamps (each)	\$ 1.62 /ea	Household Batteries (lb)	\$ 2.61 /lb
E-Waste (lb)	\$ 0.18 /lb	Non-PCB Ballasts (lb)	\$ 1.00 /lb
Fluorescent Tubes (ft)	\$ 0.48 /ft	U-Tube Fluorescent & Circular Lamps (each)	\$ 1.32 /ea
<b>Other Waste</b>			
<b>Description</b>	<b>Unit Price</b>	<b>Description</b>	<b>Unit Price</b>
Broken CRTs (lb)	\$ 0.54 /lb	Sharps - Rated Container (lb)	\$ 1.06 /lb
Pharmaceutical Waste (lb)	\$ 2.51 /lb	Sharps - Un-Rated Container (lb)	\$ 2.65 /lb

<b>HHW Admin Fee</b>	<b>\$ 13.38 /load</b>
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*Note: Kiefer Landfill does not accept all items listed above*

# WESTERN PLACER WASTE MGMT

## INCOME STATEMENT

*Year-to-Date Variance, December 2016 - current month*

	<i>6 Months Ended December 31, 2016</i>	<i>6 Months Ended December 31, 2016 Budget</i>	<i>Variance Fav/&lt;Unf&gt;</i>	<i>% Var</i>
INCOME				
LANDFILL/MRF OPS 51130	11,885,861.09	11,642,365.02	243,496.07	2.1 %
CLOSURE/POST CLOSURE 59513	108,685.53	(112,419.48)	221,105.01	196.7 %
SOLID WASTE-ROAD IMPV	12,746.36	12,392.52	353.84	2.9 %
MISCELLANEOUS OTHER REV	127,627.69	145,690.02	(18,062.33)	-12.4 %
CASH OVERAGE	111.18	0.00	111.18	
TOTAL INCOME	12,135,031.85	11,688,028.08	447,003.77	3.8 %
NET INCOME	12,135,031.85	11,688,028.08	447,003.77	3.8 %
GROSS PROFIT	12,135,031.85	11,688,028.08	447,003.77	3.8 %
EXPENSES				
A-87 COSTS	0.00	71,671.02	71,671.02	100.0 %
UNIFORMS	942.14	750.00	(192.14)	-25.6 %
COMMUNICATIONS	10,650.08	16,500.00	5,849.92	35.5 %
INSURANCE	67,208.00	70,876.00	3,668.00	5.2 %
GEN LIABILITY INS	42,020.98	43,020.98	1,000.00	2.3 %
PARTS	0.00	499.98	499.98	100.0 %
MAINTENANCE-EQUIP	0.00	1,249.98	1,249.98	100.0 %
MAINTENANCE-BLDGS & IMP	1,734.39	10,000.02	8,265.63	82.7 %
DUES, SUBSC, MEMB	1,047.57	750.00	(297.57)	-39.7 %
DEPT CASH SHORTAGE	56.94	150.00	93.06	62.0 %
PC ACQUISITION	0.00	900.00	900.00	100.0 %
PRINTING	7,740.36	8,500.02	759.66	8.9 %
OFF SUPPLIES & EXP	4,273.76	2,749.98	(1,523.78)	-55.4 %
POSTAGE	6,959.41	3,750.00	(3,209.41)	-85.6 %
MRF OPERATIONS	6,036,054.52	6,587,646.48	551,591.96	8.4 %
LANDFILL OPERATIONS	703,903.54	1,128,025.50	424,121.96	37.6 %
ADMINISTRATION	87,067.33	151,513.50	64,446.17	42.5 %
COMMISSIONERS FEES	1,200.00	1,800.00	600.00	33.3 %
PROF SVCS-PURCHD 51130	622,392.17	1,222,007.52	599,615.35	49.1 %
PROF/SPEC SVCS-COUNTY	34,164.55	64,999.98	30,835.43	47.4 %
PUBL & LEGAL NOTICES	4,302.36	4,999.98	697.62	14.0 %
RENTS & LEASES-EQUIP	0.00	1,999.98	1,999.98	100.0 %
SPECIAL DEPARTMENT EXP	275,140.66	339,454.98	64,314.32	18.9 %
TRAINING	1,015.00	499.98	(515.02)	-103.0 %

	<i>6 Months Ended December 31, 2016</i>	<i>6 Months Ended December 31, 2016</i>	<i>Variance Fav/&lt;Unf&gt;</i>	<i>% Var</i>
		<i>Budget</i>		
TRAVEL & TRANSPORTATION	0.00	1,500.00	1,500.00	100.0 %
MILEAGE	691.59	799.98	108.39	13.5 %
COUNTY VEHICLE MILEAGE	4,957.18	5,374.98	417.80	7.8 %
MEALS/FOOD PURCHASES	195.16	400.02	204.86	51.2 %
UTILITIES	29,512.64	49,999.98	20,487.34	41.0 %
WTR & SEWAGE-SPEC DIS	0.00	499.98	499.98	100.0 %
ENVIRONMENTAL ENGINEERING	1,282,521.75	1,452,859.98	170,338.23	11.7 %
TOTAL EXPENSES	9,225,752.08	11,245,750.80	2,019,998.72	18.0 %
INCOME FROM OPERATIONS	2,909,279.77	442,277.28	2,467,002.49	557.8 %
OTHER INCOME/(EXPENSES)				
EQUIPMENT	(34,510.85)	(35,000.00)	489.15	1.4 %
INTEREST REVENUE 51130	125,879.08	103,692.00	22,187.08	21.4 %
RENTS	50,705.63	45,038.52	5,667.11	12.6 %
STATE AID	8,283.16	47,500.02	(39,216.86)	-82.6 %
INT INCOME- NOTE RECEIVABLE	82,421.96	77,299.02	5,122.94	6.6 %
CONSTRUCTION PROJECTS	(883,000.93)	(1,778,608.02)	895,607.09	50.4 %
TOTAL OTHER INCOME/(EXPENSES)	(650,221.95)	(1,540,078.46)	889,856.51	57.8 %
NET INCOME BEFORE TAXES	2,259,057.82	(1,097,801.18)	3,356,859.00	305.8 %
NET INCOME	2,259,057.82	(1,097,801.18)	3,356,859.00	305.8 %

# WESTERN PLACER WASTE MGMT

## BALANCE SHEET

December 2016

### ASSETS

#### CURRENT ASSETS

CASH IN 51130	21,262,634.86
CASH IN 59513	12,200,625.81
CASH IN 59517	7,096,884.28
CASH-MARKET VALUE GAINS/LOSSES	117,115.00
CASH-MARKET VALUE GAINS/LOSSES 59513	73,245.00
CASH-MARKET VALUE GAINS/LOSSES 59517	42,738.00
ACCOUNTS RECEIVABLE	2,637,423.83
ALLOWANCE FOR UNCOLLECTED A/R	(6,167.16)
NOTES RECEIVABLE	3,059,476.53
LAND IMPROVEMENTS	9,079,390.62
LAND	13,024,847.55
BUILDINGS & IMPROVEMENTS	58,205,565.70
ACCUMULATED DEPR-B & I	(36,436,349.69)
EQUIPMENT	592,414.59
ACCUMULATED DEPR-EQUIP	(253,572.15)
ACCUMULATED DEPREC LAND IMPR	(639,426.02)
IMPREST CASH-WPWMA	8,600.00

TOTAL CURRENT ASSETS

90,065,446.75

TOTAL ASSETS

90,065,446.75

### LIABILITIES

#### CURRENT LIABILITIES

LANDFILL CLOSURE/POST CLOSURE	11,456,435.00
A/P FUND 51130	3,641,413.42

TOTAL CURRENT LIABILITIES

15,097,848.42

TOTAL LIABILITIES

15,097,848.42

### CAPITAL

NET ASS INSTD CAP ASS NET DEBT	43,572,870.58
NET ASSTS HLD IN TRUST	2,000,583.19
DESIGNATED FOR FA ACQUIS	8,623,772.00
RESERVE FOR FUT OCCUR 59517	7,196,920.00
DESIGNATED FOR CONTINGENCIES	9,844,237.74
GENERAL RESERVE FUND 59513	1,118,522.00
RESERVE FOR IMPREST CASH	8,600.00
RESERVE FOR HHW CLOSURE	33,431.00
DESIGNATED FOR ROAD IMPV	309,604.00
YTD NET INCOME	2,259,057.82

TOTAL CAPITAL

74,967,598.33

TOTAL LIABILITIES & CAPITAL

90,065,446.75

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# **WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

**Roseville, California**

## **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

**FOR THE FISCAL YEARS ENDED  
JUNE 30, 2016 AND 2015**



 **WESTERN PLACER**  
WASTE MANAGEMENT AUTHORITY

Prepared Under the Supervision of  
Valerie Bayne  
Administrative Services Manager

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

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**WESTERN PLACER**  
WASTE MANAGEMENT AUTHORITY

GEORGE MAGNUSON, ROCKLIN, CHAIR  
PAUL JOINER, LINCOLN  
ROBERT WEYGANDT, PLACER COUNTY  
SUSAN ROHAN, ROSEVILLE  
JACK DURAN, PLACER COUNTY  
KEN GREHM, EXECUTIVE DIRECTOR

December 16, 2016

To the Board of Directors and Citizens of Placer County:

The Comprehensive Annual Financial Report (CAFR) of the Western Placer Waste Management Authority (Authority) for the fiscal years ended June 30, 2016 and 2015 is hereby submitted. This report consists of management's representations concerning the finances of the Authority. Consequently, management assumes full responsibility for the completeness and reliability of all of the information presented in this report. To provide a reasonable basis for making these representations, management of the Authority has established a comprehensive internal control framework that is designed both to protect the Authority's assets from loss, theft or misuse and to compile sufficient reliable information for the preparation of the Authority's financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP). Because the costs of internal controls should not outweigh their benefits, the Authority's comprehensive framework of internal controls has been designed to provide reasonable, rather than absolute, assurance that the financial statements will be free from material misstatement. As management, we assert that, to the best of our knowledge and belief, the information contained herein is complete and reliable in all material respects.

The Authority's financial statements have been audited by Vavrinek, Trine, Day & Co., LLP, a firm of licensed certified public accountants. The goal of the independent audit was to provide reasonable assurance that the financial statements for the fiscal years ended June 30, 2016 and 2015 are free of material misstatement. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation. The independent auditor concluded, based upon the audit, that there was a reasonable basis for rendering an unmodified opinion that the Authority's basic financial statements for the fiscal years ended June 30, 2016 and 2015, are fairly presented in conformity with GAAP. The independent auditor's report is presented as the first component of the financial section of this report.

GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statement in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The Authority's MD&A can be found immediately following the report of the independent auditor.

### **Profile of the Authority**

The Authority is a public entity created on October 3, 1978 by a joint exercise of powers agreement between the County of Placer (County) and the Cities of Roseville, Rocklin, and Lincoln. The Authority is a separate and distinct entity from both the County and Cities, formed pursuant to Chapter 5, Division 7, Title 1 of the Government Code of the State of California. Pursuant to the joint powers agreement, the Placer County Treasury is utilized for depositing cash receipts and making cash disbursements and the Placer County Auditor-Controller maintains the accounting records of the Authority.

The Authority was formed to acquire, own, operate and maintain a sanitary landfill site and all related improvements. The Authority owns approximately 960 acres of land located in an unincorporated area of the County between the cities of Roseville and Lincoln, 320 acres of which are permitted for solid waste operations including landfiling and operation of a Materials Recovery Facility (MRF). The Authority has contracted with Nortech Waste LLC to operate the MRF and Nortech Landfill, Inc. to operate the landfill.

### ***RECYCLING AND DISPOSAL MADE EASY***

11476 C AVENUE AUBURN, CA 95603  
(916) 543-3960 / (916) 543-3990 FAX  
WWW.WPMA.COM



## **Economic Outlook and Conditions**

### *Placer County Economy*

During the 2016 fiscal year, for the fifth consecutive year, the County saw positive trends in certain economic segments led by median income and tourism. Also for the fifth consecutive year, the real estate housing market and labor market continued to show steady improvements. The County's unemployment level was 4.8% as of June 2016, which was slightly lower than the national level of 4.9% and the state level of 5.4%. Property tax, the County's largest discretionary revenue source, continues to increase due to the recovery in property values. The 2016 fiscal year's total secured tax roll showed an 8.7% increase in assessed values from the previous year to \$64.31 billion. Property and real property transfer taxes are projected to grow at a moderate pace of about 4 to 5% annually, sales tax collections are estimated to increase 3% annually through 2018.

### *Long-term Financial Planning*

Authority staff estimates that the recent improvements in the local economy will result in a near-term increase in commercial and residential construction. This renewed development is expected to result in increases of construction related wastes in the coming years as well as sustained, yet modest, growth in the municipal solid waste stream over time. As the Authority currently has sufficient capacity at its landfill and MRF to accept significantly more wastes on a daily basis than it currently receives, the Authority is anticipated to remain in a strong financial position as regional development and growth continue.

Strategic efforts over the last several years by the Board of Directors have positioned the Authority to have sufficient reserve account balances to fund future landfill and other solid-waste related projects and to plan for program and service delivery growth that ensures the Authority's financial well-being.

## **Major Initiatives and Accomplishments**

### **Accomplishments:**

One of the Authority's core functions is to divert materials from landfilling so that they may be reintroduced into the global economy to be recycled or reused. This serves to reduce the dependency on the use of virgin materials, limits the landfilling of wastes and insures its Member Agencies comply with California recycling mandates. Since the Authority began operation of its MRF in 1996, the percentage of materials the Authority has diverted from landfilling and sold to domestic and international markets as increased nearly 300%. This has not only significantly reduced the amount of landfill space consumed in that time but has also enabled the Member Agencies to meet and far exceed California's 50% diversion mandates and regularly surpass the state-wide average diversion rate.

Furthermore, the Authority has been able to continually update and upgrade its MRF to respond to new and emerging material markets and to increase diversion rates without issuing bonds or raising its rates.

Understanding that in addition to being a well-run and economically-viable organization, it is important to be a good neighbor, the Authority has made substantial efforts to reach out to the surrounding residential neighborhoods in an attempt to address public concerns with living next to a landfill. While the Authority has robust systems in-place to minimize impacts to the water, air and land, the facility does have the potential to generate nuisance odors. To address and better mitigate odors from its operation the Authority has invested in a sophisticated odor monitoring and tracking system. The Odotech system



employed by the Authority utilizes a series of on-site sensors that continuously monitor and record the source and relative intensity of odors generated from at the facility and combines that information with real-time weather data to generate odor-dispersion models. These modeled estimates are presented in a graphical format overlaid on Google maps satellite imagery of the areas surrounding the Authority's facility. This enables the Authority to reliably ascertain any impacts to nearby residents from nuisance odors and develop and analyze targeted solutions to reduce these odors. In an effort to generate the most realistic and accurate model results possible, the Authority engaged Odotech to amend its system to utilize a different, US EPA-approved air dispersion model that better reflects the meteorological conditions in the vicinity of the Authority's facility and engaged an independent third party to conduct odor emissions testing at the Authority's facility to validate or update the odor emission factors utilized by the Odotech monitoring system.

### **Current Activities:**

The Authority is continuing to explore ways to increase diversion, reduce operating costs and limit its impact on the surrounding environment. The Authority continues to evaluate the technical and economic feasibility of recovering and processing organic materials from the wastestream to produce clean, renewable energy and produce a valuable soil amendment. While the State of California is focusing primarily on recovery of commercially-generated organic materials, the Authority is taking a broader approach through recovery of organic materials generated by residential, commercial and industrial users. The Authority believes this not only has the potential to significantly increase diversion rates but to also reduce the potential for greenhouse gas emissions from these types of materials while producing valuable end products.

In addition the Authority currently captures the landfill gas generated at the landfill and uses the gas to generate enough electricity to power over 3,000 homes. Although the Authority has been beneficially using the landfill gas in this manner for nearly 20 years, it commissioned a detailed study to identify the highest and best use of this landfill gas asset in the future. The findings of this study suggest that the Authority could realize a significant increase in the value of the gas by virtue of diversifying the types of end uses for the gas, namely through the production of vehicle fuels for on-site and waste collection fleet vehicles, meeting all of the Authority's on-site electricity needs and providing useful green energy to future commercial, industrial or academic sectors. The Authority is in the early stages of implementing these concepts; full implementation is anticipated to occur over the next several fiscal years.

To best position itself to meet the needs of its Member Agencies, respond to continued growth in the region, address legislative and regulatory changes and maintain a financially viable operation, the Authority has initiated a facility-wide master planning effort. This effort is intended to identify how best to utilize the Authority's existing infrastructure as well as develop its expansion properties to meet the aforementioned goals. The master planning effort is anticipated to be completed by late 2017. Following development of the facility master plan, the Authority will consider initiating the necessary environmental review process to entitle, permit and develop its properties accordingly.

### **Financial Information**

Management of the Authority is responsible for establishing and maintaining internal controls designed to ensure that the assets of the Authority are protected from loss, theft or misuse and to ensure that accounting data are compiled to allow for the preparation of financial statements in conformity with account principles generally accepted in the United States of America. The internal controls are designed to provide a reasonable, but not absolute, assurance that these objectives are met recognizing that: 1) the cost of control should not exceed the benefits likely to be derived and 2) the valuation of costs and benefits requires estimates and judgments by management.



**Relevant Financial Policies:**

To achieve the goal of providing outstanding, cost-effective regional public services, the Authority applies sound management practices and policies that enhance the quality of life of its citizens. Such financial management practices have been identified by the Government Finance Officers Association of the United States and Canada and recognized by Fitch Ratings as best practices that promotes financial soundness, efficiency in government and solvency in public finance. The Authority follows the financial policies of the County, where applicable. Those financial policies are administered and overseen by the County's Finance Committee (comprised of County Executive Officer, Auditor-Controller and Treasurer-Tax Collector). All of the County's financial policies are available by request to the Placer County Auditor-Controller, 2970 Richardson Drive, Auburn, CA 95603.

**Budgetary Controls:**

State law requires the formal adoption of an appropriated budget for governmental enterprise activities. The Authority prepares an annual budget to serve as an approved plan which includes operational and capital expenditures. This budget, approved by the Board of Directors, provides the financial basis for the Authority's operations.

The Authority has adopted County controls associated with purchasing and budget management. These controls serve to verify expenses and ensure budgeted amounts are not exceeded. Monthly comparison and actual-to-budgeted revenues and expenses identify any significant variances that may require the Authority to take action.

**Awards and Acknowledgements**

The Government Finance Officers Association (GFOA) of the United States and Canada awarded the Certificate of Achievement for Excellence in Financial Reporting to the Authority for its CAFR for the fiscal year ended June 30, 2015. The Certificate of Achievement is a prestigious award recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR, the contents of which conform to program standards and satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe our CAFR continues to meet the Certificate of Achievement Program's requirements and we are applying for the Certificate again this year.

The preparation of the CAFR could not have been accomplished without the commitment and dedication of Authority staff, with special recognition to Eric Oddo and Valerie Bayne, and the County Auditor-Controller's Office.

Recognition must also be given to the Authority's Board of Directors for their unfailing support for maintaining the highest standards of professionalism in the management of the Authority's finances. Without their leadership and support, preparation of this report would not have been possible.

Respectfully submitted,



Ken Grehm  
Executive Director

## **WESTERN PLACER WASTE MANAGEMENT AUTHORITY BOARD OF DIRECTORS AND MANAGING STAFF**

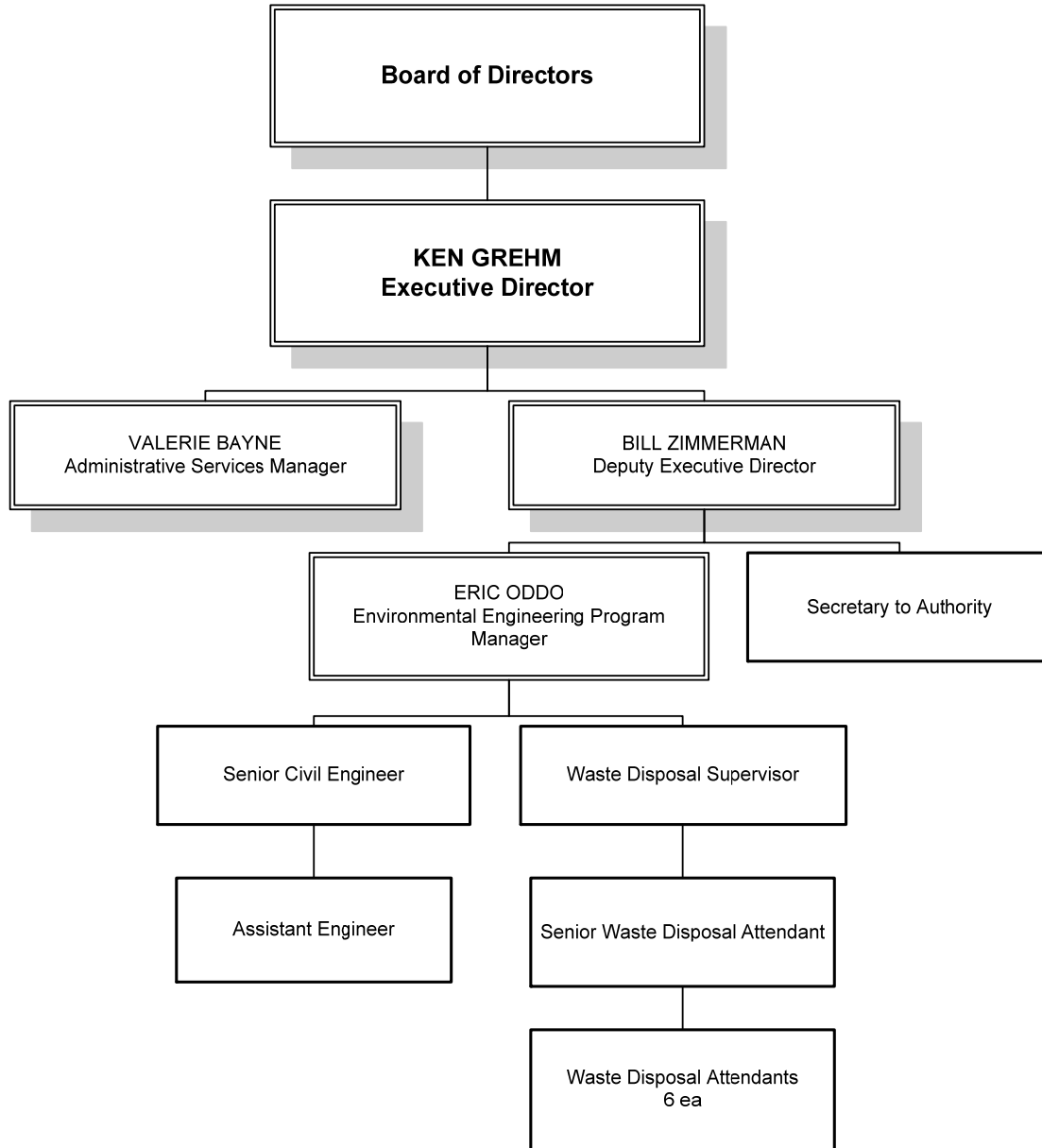
*The Western Placer Waste Management Authority is governed by representatives of its member agencies. They are:*

Jack Duran	County of Placer
Robert M. Weygandt	County of Placer
George Magnuson	City of Rocklin
Paul Joiner	City of Lincoln
Susan Rohan	City of Roseville

*The Western Placer Waste Management Authority is staffed by Placer County's Department of Facility Services. The Western Placer Waste Management Authority's managing staff are:*

Ken Grehm	Executive Director
Bill Zimmerman	Deputy Executive Director
Eric Oddo	Environmental Engineering Program Manager
Valerie Bayne	Administrative Services Manager

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY ORGANIZATIONAL CHART





Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**Western Placer Waste Management  
Authority, California**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2015**

Executive Director/CEO



## INDEPENDENT AUDITORS' REPORT

Board of Directors  
Western Placer Waste Management Authority  
Auburn, California

### Report on the Financial Statements

We have audited the accompanying financial statements of the Western Placer Waste Management Authority (Authority) as of and for the years ended June 30, 2016 and June 30, 2015, and the related notes to the financial statements, as listed in the table of contents.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditors' Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of June 30, 2016 and June 30, 2015, and the changes in financial position and its cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.



### ***Emphasis of Matter***

As described in Note 1 to the financial statements, the County adopted new accounting guidance, Governmental Accounting Standards Board (GASB) Statements No. 72, *Fair Value Measurement and Application*, effective July 1, 2014. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### ***Required Supplemental Information***

Accounting principles generally accepted in the United States of America require that the management discussion and analysis as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The introductory and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

#### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 16, 2016, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

*Vavrinick, Trine, Day & Co. LLP*

Sacramento, California  
December 16, 2016

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

This section of the annual financial report of the Western Placer Waste Management Authority (Authority) presents a discussion and analysis of financial performance during the fiscal years ended June 30, 2016 and 2015. Please read it in conjunction with the Authority's financial statements and accompanying notes, which follow this section.

**FINANCIAL HIGHLIGHTS**

- Total assets at June 30, 2016 were approximately \$88.6 million and increased approximately \$1.8 million or 2.1% from the prior year.
- Total liabilities at June 30, 2016 were approximately \$15.3 million and increased approximately \$1.1 million or 7.7% from the prior year.
- The Authority's total net position increased by approximately \$697 thousand during the fiscal year ended June 30, 2016, an increase of 1.0% from the prior year.
- Total operating revenues increased approximately \$1.7 million during the fiscal year ended June 30, 2016; an increase of approximately 8.1% over the prior year, while operating expenses increased approximately \$925 thousand or 4.1% from the prior year.
  
- Total assets at June 30, 2015 were approximately \$86.8 million and increased approximately \$89 thousand or 0.1% from 2014.
- Total liabilities at June 30, 2015 were approximately \$14.2 million and increased approximately \$481 thousand or 3.5% from 2014.
- The Authority's total net position decreased by approximately \$391 thousand during the fiscal year ended June 30, 2015, a decrease of 0.5% from 2014.
- Total operating revenues increased about \$1 million during the fiscal year ended June 30, 2015; an increase of approximately 4.9% from 2014, while operating expenses increased approximately \$756 thousand or 3.4% from 2014.

**OVERVIEW OF THE BASIC FINANCIAL STATEMENTS**

The discussion and analysis in this section are intended to serve as an introduction to the Authority's basic financial statements. The Authority's basic financial statements comprise three parts: (1) management's discussion and analysis, (2) the basic financial statements, and (3) notes to the basic financial statements.

The basic financial statements provide information about the Authority's overall financial status. The basic financial statements also include notes that explain some of the information in the basic financial statements and provide more detailed data.

The Authority's basic financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) as applied to governmental units on a full accrual basis. Under this basis, revenues are recognized in the period in which they are earned, expenses are recognized in the period in which they are incurred. All assets and liabilities associated with the operation of the Authority are included in the Statements of Net Position.

The Statements of Net Position presents the financial position of the Authority on a full accrual basis and provides information about the nature and amount of resources and obligations at year-end. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

The Statement of Revenues, Expenses and Changes in Net Position presents information showing how the Authority's net position changed during the fiscal years ended June 30, 2016 and 2015. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows.

***Statements of Net Position***

As noted earlier, net position over time, may serve as a useful indicator of the Authority's financial position. In the case of the Authority, assets exceeded liabilities by \$73.3 million and \$72.6 million as of June 30, 2016 and 2015 respectively.

As of June 30, 2016, total assets increased approximately \$1.8 million or 2.1% and liabilities have increased \$1.1 million or 7.7%. Assets increased primarily due to an increase in cash and investments in the Treasury Pool offset with decreases in capital assets and other assets. The increase in current liabilities is primarily due to the timing of contractor payments. The following table summarizes assets, liabilities and net position as of June 30, 2016 and 2015.

	<u><b>2016</b></u>	<u><b>2015</b></u>	<u><b>Variance</b></u>
Current assets	\$ 28,689,566	\$ 24,429,206	17.4%
Capital assets, net	44,155,042	46,268,208	-4.6%
Other assets	15,738,916	16,094,055	-2.2%
Total assets	<u>88,583,524</u>	<u>86,791,469</u>	<u>2.1%</u>
Current liabilities	3,818,786	3,170,255	20.5%
Noncurrent liabilities	11,456,435	11,009,629	4.1%
Total liabilities	<u>15,275,221</u>	<u>14,179,884</u>	<u>7.7%</u>
Investment in capital assets	44,155,042	46,268,208	-4.6%
Restricted	12,273,871	11,847,607	3.6%
Unrestricted	16,879,390	14,495,770	16.4%
Total net position	<u><u>\$ 73,308,303</u></u>	<u><u>\$ 72,611,585</u></u>	<u><u>1.0%</u></u>

The Authority's net position reflects restrictions imposed by outside parties for closure and postclosure care. The remaining net position represents the unrestricted portion and the Authority's net investment in capital assets. Total net position increased approximately \$697 thousand or 1% from the prior year.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

Total assets, as of June 30, 2015, increased approximately \$89 thousand or 0.1% and liabilities increased \$481 thousand or 3.5%. Assets increased primarily due to an increase in capital assets offset by decreases in cash and investments in the Treasury Pool and other assets. The increase in current liabilities is primarily due to the timing of contractor payments. Noncurrent liabilities increased as a result of the increase in the estimated landfill volume used during the fiscal year. The following table summarizes assets, liabilities and net position as of June 30, 2015 and 2014.

	<u><b>2015</b></u>	<u><b>2014</b></u>	<u><b>Variance</b></u>
Current assets	\$ 24,429,206	\$27,677,145	-11.7%
Capital assets, net	46,268,208	42,510,194	8.8%
Other assets	16,094,055	16,514,863	-2.5%
Total assets	<u>86,791,469</u>	<u>86,702,202</u>	<u>0.1%</u>
Current liabilities	3,170,255	3,057,848	3.7%
Noncurrent liabilities	11,009,629	10,641,323	3.5%
Total liabilities	<u>14,179,884</u>	<u>13,699,171</u>	<u>3.5%</u>
Investment in capital assets	46,268,208	42,510,194	8.8%
Restricted	11,847,607	11,525,044	2.8%
Unrestricted	14,495,770	18,967,793	-23.6%
Total net position	<u>\$ 72,611,585</u>	<u>\$ 73,003,031</u>	<u>-0.5%</u>

The Authority's net position reflects restrictions imposed by outside parties for closure and postclosure care. The remaining net position represents the unrestricted portion and the Authority's net investment in capital assets. Total net position decreased approximately \$391 thousand or 0.5% from the prior year.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

***Changes in Net Position***

The following table summarizes the changes in net position for the fiscal years ended June 30, 2016 and 2015:

	<u><b>2016</b></u>	<u><b>2015</b></u>	<u><b>Variance</b></u>
Operating revenues			
Fees from landfill operations	\$ 23,219,364	\$ 21,482,481	8.1%
Rental income	121,259	136,210	-11.0%
Miscellaneous income	96,017	70,137	36.9%
Total operating revenues	<u>23,436,640</u>	<u>21,688,828</u>	<u>8.1%</u>
Operating expenses			
Solid waste contractor:			
MRF	12,620,183	12,357,811	2.1%
Landfill	2,487,516	2,608,587	-4.6%
Closure and postclosure care costs	446,806	368,306	21.3%
General and administrative	5,240,536	4,694,406	11.6%
Depreciation	2,895,225	2,736,576	5.8%
Total operating expenses	<u>23,690,266</u>	<u>22,765,686</u>	<u>4.1%</u>
Operating income (loss)	<u>(253,626)</u>	<u>(1,076,858)</u>	<u>-76.4%</u>
Nonoperating revenues			
Grant revenue	82,122	70,571	16.4%
Investment earnings	868,222	614,791	41.2%
Gain on sale of capital assets	-	50	-100.0%
Total nonoperating revenues	<u>950,344</u>	<u>685,412</u>	<u>38.7%</u>
Change in net position	696,718	(391,446)	-278.0%
Net position, beginning of year	<u>72,611,585</u>	<u>73,003,031</u>	<u>-0.5%</u>
Net position, end of year	<u>\$ 73,308,303</u>	<u>\$ 72,611,585</u>	<u>1.0%</u>

Fiscal year 2016's operating revenues increased approximately \$1.7 million or 8.1% over the prior year due to an increase in waste tonnage for regional residential and commercial development. Total operating expenses increased by \$925 thousand or 4.1% over the prior year primarily due to an increase in the MRF operating expenses of \$262 thousand due to an increase in the tonnage delivered at the facility, an increase in the general and administrative expenses of \$546 thousand due to an increase in the landfill gas monitoring contract, offset against a decrease of \$121 thousand in landfill expenses. The \$265 thousand or 38.7% increase in fiscal year 2016's nonoperating revenues over fiscal year 2015 was primarily due to an increase in investment earnings as a result of fiscal year 2016's fair market value and fair value adjustments.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

The following table summarizes the changes in net position for the fiscal years ended June 30, 2015 and 2014:

	<u><b>2015</b></u>	<u><b>2014</b></u>	<u><b>Variance</b></u>
Operating revenues			
Fees from landfill operations	\$ 21,482,481	\$ 20,423,095	5.2%
Rental income	136,210	130,691	4.2%
Miscellaneous income	70,137	120,851	-42.0%
Total operating revenues	<u>21,688,828</u>	<u>20,674,637</u>	<u>4.9%</u>
Operating expenses			
Solid waste contractor:	-		
MRF	12,357,811	11,418,618	8.2%
Landfill	2,608,587	2,559,553	1.9%
Landfill maintenance	-	683,615	-100.0%
Closure and postclosure care costs	368,306	435,621	-15.5%
General and administrative	4,694,406	4,187,724	12.1%
Depreciation	2,736,576	2,724,347	0.4%
Total operating expenses	<u>22,765,686</u>	<u>22,009,478</u>	<u>3.4%</u>
Operating income (loss)	<u>(1,076,858)</u>	<u>(1,334,841)</u>	<u>-19.3%</u>
Nonoperating revenues			
Grant revenue	70,571	70,680	-0.2%
Investment earnings	614,791	901,928	-31.8%
Gain on sale of capital assets	50	-	100.0%
Total nonoperating revenues	<u>685,412</u>	<u>972,608</u>	<u>-29.5%</u>
Change in net position	(391,446)	(362,233)	8.1%
Net position, beginning of year	<u>73,003,031</u>	<u>73,365,264</u>	<u>-0.5%</u>
Net position, end of year	<u>\$ 72,611,585</u>	<u>\$ 73,003,031</u>	<u>-0.5%</u>

Fiscal year 2015's operating revenues increased approximately \$1 million or 4.9% over 2014 due to an increase in waste tonnage for regional residential and commercial development. Total operating expenses increased by \$756 thousand or 3.4% over 2014 primarily due to an increase in the MRF operating expenses of \$939 thousand due to an increase in the tonnage delivered at the facility, an increase in the general and administrative expenses of \$507 thousand due to an increase in the landfill gas monitoring contract, offset against a decrease in landfill maintenance expenses of \$684 thousand. The \$287 thousand or 29.5% decrease in fiscal year 2015's nonoperating revenues over fiscal year 2014 was primarily due to a decrease in investment income.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**CAPITAL ASSETS**

As of June 30, 2016 and 2015, the Authority's investment in capital assets was approximately \$44.2 million and \$46.3 million, respectively (net of accumulated depreciation). The \$2.2 million decrease in net capital assets was primarily due to the fiscal year 2016's capitalization of approximately \$500 thousand in landfill liners offset with the 2016's depreciation expense of approximately \$2.9 million. The composition of capital assets is as follows:

	<b><u>2016</u></b>	<b><u>2015</u></b>	<b><u>Variance</u></b>
Land	\$ 13,024,848	\$ 13,024,848	0.0%
Land improvements	9,079,390	8,568,373	6.0%
Buildings and improvements	58,205,566	57,959,949	0.4%
Equipment	592,414	566,989	4.5%
Total	80,902,218	80,120,159	1.0%
Less accumulated depreciation	(36,747,176)	(33,851,951)	8.6%
Capital assets – net	<u>\$ 44,155,042</u>	<u>\$ 46,268,208</u>	<u>-4.6%</u>

As of June 30, 2015 and 2014, the Authority's investment in capital assets was approximately \$46.3 and \$42.5 million, respectively (net of accumulated depreciation). The \$3.8 million increase in net capital assets was primarily due to the fiscal year 2015's capitalization of approximately \$6.4 million in landfill liners offset with the 2015's depreciation expense of approximately \$2.7 million. The composition of capital assets is as follows:

	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>Variance</u></b>
Land	\$ 13,024,848	\$13,024,848	0.0%
Land improvements	8,568,373	2,099,209	308.2%
Buildings and improvements	57,959,949	57,959,949	0.0%
Equipment	566,989	541,564	4.7%
Total	80,120,159	73,625,570	8.8%
Less accumulated depreciation	(33,851,951)	(31,115,376)	8.8%
Capital assets – net	<u>\$ 46,268,208</u>	<u>\$ 42,510,194</u>	<u>8.8%</u>

Additional information regarding capital assets can be found in Note 4.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**ECONOMIC FACTORS AND NEXT YEAR'S BUDGET**

After several years of declining tonnages due to a decline in housing and commercial development, the Authority experienced a modest increase in waste flows in FY 2015/16 which provided revenues sufficient to cover expenses. The Authority has maintained a good hold on the waste stream by maintaining competitive tipping fees. A convenient location and reasonable rates have also continued to attract self-haul customers to the facility. The Authority anticipates that waste tonnages will continue to increase at a moderate pace in FY 2016/17 as regional residential and commercial development continue to increase. With the ongoing state and local efforts to reduce water consumption by reducing landscaping, the amount of greenwaste received at the Authority's facility is not anticipated to increase in the near term.

After maintaining (or reducing) tipping fees for over 10 years, the Authority implemented a modest increase to its tipping fee structure that took effect at the beginning of FY 2015/16. Based on the waste tonnages received in FY 2015/16, the tipping fee increase generated an additional 3.26% in annual gross revenues.

In response to recent changes in state law, the Authority has investigated the technical, economic, and environmental feasibility of managing a larger portion of the organic fraction of the waste stream (primarily food waste) using anaerobic digestion technology and/or composting. While the State has mandated that commercial generators participate in a program to divert organics from landfilling, the Authority concluded that a system involving a combination of source separated food waste collection from larger commercial customers coupled with recovery of both commercially and residentially-generated food wastes at its materials recovery facility may be the most economically viable method to divert the maximum amount of food waste from landfilling. In the near term, source separated food waste collected by the jurisdictions will be sent to third party facilities for processing rather than sending the material to the Authority's facility which would require investing in additional on-site processing infrastructure. Longer term solutions for managing food waste at the Authority's facility are included in the facility master planning efforts discussed later in this section.

In March 2016, the Authority approved an amendment with Energy 2001 (who leases land from the Authority and produces electricity from landfill gas generated at the landfill) that extended the term of their lease agreement by through June 2020. Under the terms of the amendment, the Authority will earn additional royalty revenues from the sale of electricity by Energy 2001 as well realize electricity cost savings by having the ability to purchase electricity (at below PG&E rates) generated via a photovoltaic solar array installed by Energy 2001.

In December 2015, the Authority Board of Directors approved a landfill gas strategic plan that will serve as a guidance document for the Authority to maximize the future value of its LFG asset while continuing to meet all applicable regulatory and legal operating requirements. The strategic plan suggests the Authority could realize a significant increase in the value of the gas by virtue of diversifying the types of end uses for the gas, namely through the production of vehicle fuels and generation of electricity for both on and off-site uses. The Authority is in the early stages of implementation of the strategic plan; full implementation is anticipated to occur over the next several fiscal years.



**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED)  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

To better position itself to take advantage of a diversified number of end uses of the landfill gas asset, as well as provide improved methods for maintaining regulatory compliance and managing and monitoring system operations, the Authority is undertaking a project to upgrade its landfill gas collection and control system. The upgrade will include additional gas collection infrastructure as well as a new blower, enclosed ground flare, electrical power service and data collection, control and instrumentation equipment. Construction is scheduled to begin by the end of calendar year 2016 and completed in the summer of 2017.

After over 20 years of continuous, heavy-duty service, the Authority replaced a majority of the concrete receiving floor within the materials recovery facility. To insure uninterrupted service during the renovation, the Authority, via its contract facility operator Nortech Waste, replaced the floor in two phases with the majority of the work occurring during non-operational hours. Additionally, a high-strength, early-cure concrete mix was employed to minimize the amount of time sections of the floor are out of service.

In July 2015, the Authority began the process of identifying conceptual future operational uses within the footprint of its current facility as well as for its eastern and western expansion properties. In October 2016, after conducting a competitive procurement process, the Authority entered into an agreement with CH2M Hill Engineers to provide master planning services and to prepare the required environmental review document related to the identified conceptual uses. The Authority anticipates the master planning effort will take approximately 12 months and the subsequent environmental review process will take 18 months to complete.

**CONTACTING AUTHORITY'S FINANCIAL MANAGEMENT**

The financial report is designed to provide a general overview of the Authority's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to Valerie Bayne, Administrative Services Manager, 11476 C Avenue, Auburn, California 95603 or call (530) 889-6803.

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## STATEMENTS OF NET POSITION JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b>ASSETS</b>		
Current assets:		
Cash and investments in Treasury Pool	\$ 26,317,789	\$ 22,597,366
Petty cash	8,600	9,400
Accounts receivable, less allowance for uncollectible accounts of \$6,167 for 2016 and 2015	2,323,715	1,798,484
Interest receivable	38,898	23,956
Prepaid expenses	564	-
Total current assets	<u>28,689,566</u>	<u>24,429,206</u>
Noncurrent assets:		
Restricted cash and investments in Treasury Pool	12,273,871	11,847,607
Note receivable	3,465,045	4,246,448
Non-depreciable capital assets	13,024,848	13,024,848
Depreciable capital assets, net of accumulated depreciation	31,130,194	33,243,360
Total noncurrent assets	<u>59,893,958</u>	<u>62,362,263</u>
Total assets	<u>88,583,524</u>	<u>86,791,469</u>
<b>LIABILITIES</b>		
Current liabilities:		
Accounts payable and accrued expenses	3,811,366	3,160,554
Unearned revenue	7,420	9,701
Total current liabilities	<u>3,818,786</u>	<u>3,170,255</u>
Noncurrent liabilities:		
Estimated liability for landfill closure and postclosure care costs	11,456,435	11,009,629
Total liabilities	<u>15,275,221</u>	<u>14,179,884</u>
<b>NET POSITION</b>		
Investment in capital assets	44,155,042	46,268,208
Restricted for closure and postclosure	12,273,871	11,847,607
Unrestricted	16,879,390	14,495,770
Total net position	<u>\$ 73,308,303</u>	<u>\$ 72,611,585</u>

The notes to the basic financial statements are an integral part of these statements.

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b>OPERATING REVENUES:</b>		
Fees from landfill operations	\$ 23,219,364	\$ 21,482,481
Rental income	121,259	136,210
Miscellaneous income	96,017	70,137
Total operating revenues	<u>23,436,640</u>	<u>21,688,828</u>
<b>OPERATING EXPENSES:</b>		
Solid waste contractor:		
MRF	12,620,183	12,357,811
Landfill	2,487,516	2,608,587
Depreciation	2,895,225	2,736,576
Professional services - county	2,759,689	2,324,506
Landfill closure and postclosure care costs	446,806	368,306
Professional services - purchased	1,480,954	1,290,123
Special department expenses	507,808	597,467
Administration	180,041	184,833
General liability insurance	111,169	113,192
Utilities	94,166	86,555
Other expenses	106,709	97,730
Total operating expenses	<u>23,690,266</u>	<u>22,765,686</u>
Operating loss	<u>(253,626)</u>	<u>(1,076,858)</u>
<b>NONOPERATING REVENUES:</b>		
Grant revenue	82,122	70,571
Investment earnings	868,222	614,791
Gain on sale of capital assets	-	50
Total nonoperating revenues	<u>950,344</u>	<u>685,412</u>
Changes in net position	696,718	(391,446)
Net position, beginning of year	<u>72,611,585</u>	<u>73,003,031</u>
Net position, end of year	<u><u>\$ 73,308,303</u></u>	<u><u>\$ 72,611,585</u></u>

The notes to the basic financial statements are an integral part of these statements.

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## STATEMENTS OF CASH FLOWS FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015

	<u>2016</u>	<u>2015</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Cash receipts from customers	\$ 23,475,536	\$ 22,657,813
Cash receipts from other operating activities	214,995	194,592
Cash paid to suppliers for goods and services	(19,697,987)	(19,536,642)
Net cash provided by operating activities	<u>3,992,544</u>	<u>3,315,763</u>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:</b>		
State grant receipts	<u>82,122</u>	<u>70,571</u>
Net cash provided by noncapital financing activities		
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</b>		
Acquisition of capital assets	(782,059)	(6,494,590)
Proceeds on sale of capital assets	-	50
Net cash used for capital and related financing activities	<u>(782,059)</u>	<u>(6,494,540)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Investment earnings received	<u>853,280</u>	<u>625,186</u>
Net cash provided by investing activities	<u>853,280</u>	<u>625,186</u>
Net increase (decrease) in cash and cash equivalents	4,145,887	(2,483,020)
Cash and cash equivalents, beginning of year	<u>34,454,373</u>	<u>36,937,393</u>
Cash and cash equivalents, end of year	<u>\$ 38,600,260</u>	<u>\$ 34,454,373</u>
<b>RECONCILIATION TO THE STATEMENTS OF NET POSITION:</b>		
Cash and investments in Treasury Pool	\$ 26,317,789	\$ 22,597,366
Petty cash	8,600	9,400
Restricted cash and investments in Treasury Pool	<u>12,273,871</u>	<u>11,847,607</u>
Total cash and cash equivalents	<u>\$ 38,600,260</u>	<u>\$ 34,454,373</u>
<b>RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED BY OPERATING ACTIVITIES:</b>		
Operating loss	\$ (253,626)	\$ (1,076,858)
Adjustments to reconcile operating loss to net cash provided by operating activities:		
Depreciation	2,895,225	2,736,576
(Increase) decrease in accounts receivable	(525,231)	431,961
(Increase) decrease in notes receivable	781,403	743,371
(Increase) in prepaid expenses	(564)	-
Increase in accounts payable and accrued expenses	650,812	124,162
(Decrease) in unearned revenue	(2,281)	(11,755)
Increase in estimated liability for landfill closure and postclosure care costs	<u>446,806</u>	<u>368,306</u>
Net cash provided by operating activities	<u>\$ 3,992,544</u>	<u>\$ 3,315,763</u>

The notes to the basic financial statements are an integral part of these statements.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 1 – ORGANIZATION AND OPERATIONS**

Western Placer Waste Management Authority (Authority) is a public entity created on October 3, 1978 by a joint exercise of powers agreement between the County of Placer (County) and the Cities of Roseville, Rocklin, and Lincoln. The Authority is a separate and distinct entity from both the County and Cities, formed pursuant to Chapter 5, Division 7, Title 1 of the Government Code of the State of California. Pursuant to the joint powers agreement, the Placer County Treasury is utilized for depositing cash receipts and making cash disbursements and the Placer County Auditor-Controller maintains the accounting records for the Authority.

The Authority was formed to acquire, own, operate, and maintain a sanitary landfill site and all related improvements. The original disposal site comprises 320 acres, and is located in an unincorporated area of the County between the cities of Roseville and Lincoln. An additional 480 acres were purchased on August 10, 1990 which lies to the west of the existing landfill site, separated by Fiddymment Road. Nortech Waste LLC is the landfill site and Materials Recovery Facility (MRF) operator.

**NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

***Reporting Entity***

The financial statements include all of the financial activities of the Authority and have been prepared in conformity with accounting principles generally accepted in the United States of America as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The more significant of the accounting policies are described below.

***Basis of Accounting***

The Authority utilizes the accrual basis of accounting in the accompanying financial statements to account for its enterprise activity. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period in which liabilities are incurred.

The Authority uses a proprietary (enterprise) fund to account for its activities. An enterprise fund may be used to report any activity for which a fee is charged to external users for goods or services. Enterprise funds are required for any activity whose principal external revenue sources meet any of the following criteria: (1) issued debt is backed solely by fees and charges, (2) the cost of providing services for any activity (including capital costs such as depreciation or debt service) must be legally recovered through fees or charges, or (3) if the government's policy is to establish activity fees or charges designed to recover the cost of providing services. The Authority distinguishes operating and nonoperating revenues and expenses. Operating revenues and expenses generally result from operating the sanitary landfill. All revenues and expenses that do not meet this definition are reported as nonoperating.

When both restricted and unrestricted net position are available, unrestricted resources are used only after the restricted resources are depleted.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

***Fair Value Measurement***

As of July 1, 2015, the Authority retrospectively applied Governmental Accounting Standards Board (“GASB”) Statement No. 72, *Fair Value Measurement and Application*. GASB Statement No. 72 provides guidance for determining a fair value measurement for reporting purposes and applying fair value to certain investments and disclosures related to all fair value measurements. The Authority categorizes the fair value measurements of its investments based on the hierarchy established by generally accepted accounting principles. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset’s fair value: Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The Authority does not have any investments that are measured using Level 3 inputs.

The Authority is a participant in the Placer County Treasurer’s Pool (County Pool). The County Pool is an external investment pool, is not rated and is not registered with the Securities Exchange Commission (SEC). The Placer County Treasurer’s Review Panel conducts County Pool oversight. Cash on deposit in the County Pool at June 30, 2016 and 2015, is stated at fair value. The County Pool values participant shares on an amortized cost basis during the year and adjusts to fair value at year-end. For further information regarding the County Pool, refer to the County of Placer Comprehensive Annual Financial Report.

***Budgetary Process***

The Authority prepares an annual operating and capital budget, which is approved and adopted by the Board of Directors. The budget serves as an approved plan to facilitate financial control and operational evaluation. California state law does not require formal adoption of appropriated budgets for enterprise funds.

***Cash and Cash Equivalents***

Cash and cash equivalents represent the Authority’s share of the County Treasurer’s cash and investment pool. Cash and cash equivalents are considered to be investment with original maturities of 3 months or less. For purposes of the statements of cash flows, the Authority’s cash and investment in the County Treasurer’s pool is considered cash and cash equivalents.

***Use of Estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

***Capital Assets***

Additions by the Authority are recorded as capital assets for equipment with a cost of \$5,000 or more and for buildings, improvements and liners with a cost of \$50,000 or more. Repairs and maintenance are recorded as expenses; renewals and betterments are capitalized. The sale or disposal of capital assets are recorded by eliminating the original cost and related accumulated depreciation, resulting in the recognition of a gain or loss.

Depreciation has been calculated on each class of depreciable property using the straight-line method over the shorter of the following estimated useful lives or the remaining years until the landfill is estimated to be at capacity:

Buildings, improvements and liners	10-50 years
Equipment	5-20 years

***Effect of New Governmental Accounting Standards Board (GASB) Pronouncements***

GASB Statement No. 72 – In February 2015, GASB issued Statement No. 72, *Fair Value Measurement and Application*. This statement addresses accounting and financial reporting issues related to fair value measurements. The definition of fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This statement provides guidance for determining a fair value measurement for financial reporting purposes. This statement also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements. This statement is effective for periods beginning after June 15, 2015. The Authority implemented this standard as of July 1, 2014.

GASB Statement No. 73 – In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and No. 68*. The objective of this statement is to improve the usefulness of information about pensions included in the general purpose external financial reports of state and local governments for making decisions and assessing accountability. This statement establishes requirements for defined benefit pensions that are not within the scope of Statement No. 68, Accounting and Financial Reporting for Pensions, as well as for the assets accumulated for purposes of providing those pensions. In addition, it establishes requirements for defined contribution pensions that are not within the scope of Statement No. 68. It also amends certain provisions of Statement No. 67, Financial Reporting for Pension Plans, and Statement 68 for pension plans and pensions that are within their respective scopes. The requirements of this statement are effective for reporting periods beginning after June 15, 2015, except for the certain provisions, which are effective for reporting periods beginning after June 15, 2016. The Authority has determined that this statement is not applicable.

GASB Statement No. 76 – In June 2015, GASB issued Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*. The objective of this statement is to identify—in the context of the current governmental financial reporting environment—the hierarchy of generally accepted accounting principles (GAAP). This statement is effective for periods beginning after June 15, 2015. The Authority implemented this standard as of July 1, 2014. The Authority has determined that this statement did not have a material effect on the financial statements.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

***Effect of New Governmental Accounting Standards Board (GASB) Pronouncements (Continued)***

GASB Statement No. 79 – In December 2015, GASB issued Statement No. 79, *Certain External Investment Pools and Pool Participants*. This statement addresses accounting and financial reporting for certain external investment pools and pool participants. Specifically, it establishes criteria for an external investment pool to qualify for making the election to measure all of its investments at amortized cost for financial reporting purposes. The requirements of this statement are effective for reporting periods beginning after June 15, 2015, except for the certain provisions, which are effective for reporting periods beginning after December 15, 2015. The Authority has determined that this statement is not applicable.

***Effect of Future Governmental Accounting Standards Board (GASB) Pronouncements***

GASB Statement No. 73 – In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and No. 68*. Certain provisions of this statement are effective for periods beginning after June 15, 2016. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 74 – In June 2015, GASB issued Statement 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. The objective of this statement is to improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. This statement is effective for periods beginning after June 15, 2016. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 75 – In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The primary objective of this statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This statement is effective for periods beginning after June 15, 2017. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 77 – In August 2015, GASB issued Statement No. 77, *Tax Abatement Disclosures*. This statement requires governments that enter into tax abatement agreements to disclose certain information about the agreements. The requirements of this statement are effective for reporting periods beginning after December 15, 2015. The Authority has not determined the effect, if any, on the financial statements.



**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

***Effect of Future Governmental Accounting Standards Board (GASB) Pronouncements (Continued)***

GASB Statement No. 78 – In December 2015, GASB issued Statement No. 78, *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*. The objective of this statement is to address a practice issue regarding the scope and applicability of Statement No. 68, *Accounting and Financial Reporting for Pensions*. This issue is associated with pensions provided through certain multiple-employer defined benefit pension plans and to state or local governmental employers whose employees are provided with such pensions. The requirements of this statement are effective for reporting periods beginning after December 15, 2015. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 80 – In January 2016, GASB issued Statement No. 80, *Blending Requirements for Certain Component Units* – an amendment of GASB No. 14. The objective of this statement is to improve financial reporting by clarifying the financial statement presentation requirements for certain component units. This Statement amends the blending requirements for the financial statement presentation of component units of all state and local governments. The requirements of this statement are effective for reporting periods beginning after June 15, 2016. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 81 – In March 2016, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. The objective of this Statement is to improve accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2016. The Authority has not determined the effect, if any, on the financial statements.

GASB Statement No. 82 – In March 2016, GASB issued Statement No. 82, *Pension Issues-An Amendment of GASB Statements No. 67, No. 68 and No. 73*. The objective of this Statement is to address certain issues that have been raised with respect to Statements No. 67, *Financial Reporting for Pension Plans*, No. 68, *Accounting and Financial Reporting for Pensions*, and No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice or financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The Authority has not determined the effect, if any, on the financial statements.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 3 – CASH AND INVESTMENTS**

Cash and investments as of June 30, 2016 and 2015 are classified in the accompanying financial statements as follows:

	<u><b>2016</b></u>	<u><b>2015</b></u>
Cash and investments in Treasury Pool	\$26,317,789	\$ 22,597,366
Restricted cash and investments in Treasury Pool	12,273,871	11,847,607
Petty cash	8,600	9,400
	<u><b>\$38,600,260</b></u>	<u><b>\$ 34,454,373</b></u>

***Investments***

The Placer County Treasurer pools all funds that it manages, and on a monthly basis allocates investment earnings and expenses based upon average daily cash balances. The County is restricted by California Government Code in the types of investments it can purchase. Further, the County Treasurer has a written investment policy which is approved by the County Board of Supervisors, and has been adopted by the Authority. The County's investment policy is more restrictive than California Government Code as to terms of maturity and type of allowable investments. The Treasury Pool is not SEC registered, but is invested in accordance with California Government Code section 53600 et. seq. The County's Treasury Review Panel, performs regulatory oversight of the Treasury Pool pursuant to California Government Code Section 27134. As of June 30, 2016 and 2015, the Authority has reported its investment in the Treasury Pool at estimated fair value. However, the value of the pool shares in the County which may be withdrawn is determined on an amortized cost basis, which is different than the fair value of the Authority's position in the pool.

***Fair Value Measurement***

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets, Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. As of June 30, 2016, the Authority held no individual investments. All funds are invested in the County Pool. In instances where inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The Authority's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability.

Deposits and withdrawals from the County Pool are made on the basis of \$1 and not fair value. Accordingly, the Authority's proportionate share of cash and investments in the County Pool at June 30, 2016 and 2015 of \$38,591,660 and \$34,444,973, respectively, is an uncategorized input not defined as a Level 1, Level 2, or Level 3 input.

GASB Statement No. 40, *Deposit and Investment Risk Disclosure – an amendment of GASB Statement No. 3*, requires additional disclosures about a government's deposit and investment risks that include credit risk, custodial credit risk, concentration of credit risk and interest rate risk. The Authority does not have a separate investment policy, or any other policies that address these specific types of risk. The cash and investments held in the County's Pool is available on demand.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 3 – CASH AND INVESTMENTS (CONTINUED)**

***Interest Rate Risk***

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value is to changes in market interest rates. The weighted average to maturity of the County's external investment pool as of June 30, 2016 and 2015 was 1,426 days and 1,483 days, respectively.

***Credit Risk***

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. The credit rating and other information regarding specific investments maintained in the Treasury Pool as of June 30, 2016 and 2015 are disclosed in the County's Comprehensive Annual Financial Report. The Authority's investment in the County external investment pool is not rated.

***Custodial Credit Risk***

Custodial credit risk is the risk that, in the event of the failure of the counterparty to a transaction, the Authority will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party.

Required disclosure information regarding the categorization of investments and other deposit and investment risk disclosures can be found in the County's Comprehensive Annual Financial Report which may be obtained by contacting the County Auditor-Controller's Office at 2970 Richardson Drive, Auburn, California 95603.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 4 – CAPITAL ASSETS**

Capital asset activity for the fiscal year ended June 30, 2016 was as follows:

	<u>Balance July 1, 2015</u>	<u>Additions and Tranfers</u>	<u>Retirements and Tranfers</u>	<u>Balance June 30, 2016</u>
<b>Capital assets, not being depreciated</b>				
Land	\$ 13,024,848	\$ -	\$ -	\$ 13,024,848
Total capital assets not depreciated	<u>13,024,848</u>	<u>-</u>	<u>-</u>	<u>13,024,848</u>
<b>Capital assets, being depreciated</b>				
Land improvements	8,568,373	511,017	-	9,079,390
Building and improvements	57,959,949	245,617	-	58,205,566
Equipment	<u>566,989</u>	<u>25,425</u>	<u>-</u>	<u>592,414</u>
Total capital assets being depreciated	<u>67,095,311</u>	<u>782,059</u>	<u>-</u>	<u>67,877,370</u>
Less accumulated depreciation for:				
Land improvements	(314,877)	(257,177)	-	(572,054)
Building and improvements	(33,344,783)	(2,588,758)	-	(35,933,541)
Equipment	<u>(192,291)</u>	<u>(49,290)</u>	<u>-</u>	<u>(241,581)</u>
Total accumulated depreciation	<u>(33,851,951)</u>	<u>(2,895,225)</u>	<u>-</u>	<u>(36,747,176)</u>
Total capital assets, being depreciated, net	<u>33,243,360</u>	<u>(2,113,166)</u>	<u>-</u>	<u>31,130,194</u>
Total capital assets, net	<u>\$ 46,268,208</u>	<u>\$ (2,113,166)</u>	<u>\$ -</u>	<u>\$ 44,155,042</u>

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 4 – CAPITAL ASSETS (CONTINUED)**

Capital asset activity for the fiscal year ended June 30, 2015 was as follows:

	<u>Balance July 1, 2014</u>	<u>Additions and Transfers</u>	<u>Retirements and Transfers</u>	<u>Balance June 30, 2015</u>
<b>Capital assets, not being depreciated</b>				
Land	\$ 13,024,848	\$ -	\$ -	\$ 13,024,848
Total capital assets not depreciated	<u>13,024,848</u>	<u>-</u>	<u>-</u>	<u>13,024,848</u>
<b>Capital assets, being depreciated</b>				
Land improvements	2,099,208	6,469,165	-	8,568,373
Building and improvements	57,959,949	-	-	57,959,949
Equipment	541,564	25,425	-	566,989
Total capital assets being depreciated	<u>60,600,721</u>	<u>6,494,590</u>	<u>-</u>	<u>67,095,311</u>
Less accumulated depreciation for:				
Land improvements	(209,916)	(104,961)	-	(314,877)
Building and improvements	(30,761,483)	(2,583,300)	-	(33,344,783)
Equipment	(143,976)	(48,315)	-	(192,291)
Total accumulated depreciation	<u>(31,115,375)</u>	<u>(2,736,576)</u>	<u>-</u>	<u>(33,851,951)</u>
Total capital assets, being depreciated, net	<u>29,485,346</u>	<u>3,758,014</u>	<u>-</u>	<u>33,243,360</u>
Total capital assets, net	<u>\$ 42,510,194</u>	<u>\$ 3,758,014</u>	<u>\$ -</u>	<u>\$ 46,268,208</u>

**NOTE 5 – NOTE RECEIVABLE**

On September 9, 2010 the Authority entered into a secured non-negotiable promissory note with Nortech Waste LLC for a not to exceed amount of \$6,800,000. This amount was contingent upon Nortech installing a glass processing line at the MRF. If Nortech did not install the contingent improvement, the outstanding balance of this note shall not exceed the aggregate sum of \$5,500,000.

During the fiscal year ended June 30, 2012, Nortech installed the contingent improvement and was advanced the remaining amounts for a total of \$6,800,000. Furthermore, on December 1, 2011 the promissory note was converted to a term loan ending on June 30, 2020 with an interest rate of 5%. As of June 30, 2016 and June 30, 2015, the total amount owed to the Authority was \$3,465,045 and \$4,246,448 respectively.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 6 – CLOSURE AND POSTCLOSURE CARE COSTS**

The Authority accounts for solid waste landfill closure and postclosure costs based on the provisions of GASB Statement No. 18, *Accounting for Municipal Solid Waste Landfill Closure and Postclosure Care Costs*. This statement is based on state and federal laws and regulations that place specific requirements on the Authority regarding closure and postclosure maintenance and monitoring functions for the Authority's landfill. These postclosure functions are required for 30 years after closure of the landfill site.

The \$11,456,435 and \$11,009,629 reported as landfill closure and postclosure care liability as of June 30, 2016 and 2015 represent the cumulative amount reported to date based on the use of approximately 31.67 percent and 30.74 percent, respectively, of the estimated capacity of the landfill. The Authority will recognize the remaining estimated cost of closure and postclosure care of \$24,712,599 and \$24,801,296 at June 30, 2016 and 2015, respectively, as the remaining estimated capacity is filled. The Authority currently estimates the landfill will reach capacity in fiscal year 2058.

During the fiscal year ended June 30, 2016, the volume available remains at 36,350,000 yards. As of June 30, 2016, total estimated costs for closure and postclosure increased from \$35,810,925 at June 30, 2015 to \$36,169,034 at June 30, 2016 and the remaining capacity of the landfill decreased from approximately 69.26 percent to approximately 68.33 percent at June 30, 2015 and 2016, respectively. These changes resulted in an adjustment to the landfill closure and postclosure care liability of \$446,806 and \$368,306 for the fiscal years ended June 30, 2016 and 2015, respectively.

Future closure and postclosure costs are based on what it would cost to perform all closure and postclosure care in 2016. Actual costs may be higher due to inflation, changes in technology, changes in permitted capacity and/or changes in regulations. The Authority is required by state and federal laws and regulations to provide financial assurance that appropriate resources will be available to finance closure and postclosure care costs in the future. Management has accumulated sufficient assets to finance closure and postclosure costs as required by applicable laws as of June 30, 2016. The Board of Directors established a closure and postclosure fund reserve in accordance with Resolution No. 92-4 to provide financial assurance for the closure and postclosure maintenance costs. Management expects that any change to future closure and postclosure costs (due to changes in technology or applicable laws or regulations, for example) will be paid from charges to future users. As of June 30, 2016 and 2015, assets set-aside of \$12,273,871 and \$11,847,607, respectively, have been restricted to provide the final cover and postclosure maintenance upon closure of the landfill in accordance with the requirements of Title 14, California Code of Regulations (CCR), Division 7, Chapter 5, Article 3.5, Section 18282.

As the owner and operator of a landfill site, the Authority has potential exposure to environmental liability. The Authority may be required to perform corrective action for contaminate releases at its landfill. The Authority is continually evaluating its potential exposure to remediation liabilities on its landfill site. On the basis of information currently available to management, the Authority's management believes it has sufficient reserves for known and anticipated remediation costs. At June 30, 2016 and 2015, \$884,479 and \$875,222, respectively, has been accrued for corrective action costs and is included in the total closure and postclosure liability.

**WESTERN PLACER WASTE MANAGEMENT AUTHORITY  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
FOR THE FISCAL YEARS ENDED JUNE 30, 2016 AND 2015**

**NOTE 7 – RISK MANAGEMENT – CLAIMS AND JUDGMENTS**

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; pollution; and natural disasters.

The Authority purchases commercial insurance for the MRF building and MRF equipment for claims in excess of a \$10,000 deductible per the statement of values on file with Alliant. The Authority also purchases general liability and pollution liability coverage. As of June 30, 2016 and 2015, the general liability and pollution liability coverage amount was \$2,000,000 on occurrence basis and claims made basis, respectively, with deductible amounts of \$5,000 and \$25,000, respectively.

The Authority has had no settlement amounts exceeding insurance coverage for the last three years.

**NOTE 8 – CONCENTRATION OF VOLUME OF BUSINESS**

Recology Auburn Placer (formerly Auburn Placer Disposal) and the City of Roseville are the major customers of the landfill and constitute approximately 81.57% and 78.55% of the accounts receivable balance and 73.28% and 71.85% of total fees from landfill operations as of June 30, 2016 and 2015, respectively. Since the Authority has previously entered into separate flow control agreements with many of the participating agencies, there is little risk of these customers (which represent the majority of the Authority's revenues) from ceasing delivery of their wastes to the Authority's facility.

**NOTE 9 – RELATED PARTY TRANSACTIONS**

The Authority utilizes employees of the County and uses other County departments for other services, such as risk management, engineering, accounting, etc. Expenses paid to the County during the fiscal years ended June 30, 2016 and 2015 were \$2,759,689 and \$2,324,506, respectively.

**NOTE 10 – CONTINGENCIES**

The Authority is involved in various legal proceedings from time to time in the normal course of business. In management's opinion, the Authority is not involved in any legal proceeding that will have a material adverse effect on financial position or changes in financial position of the Authority.

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## STATISTICAL SECTION

This part of the Authority's Comprehensive Annual Financial Report presents detailed information as a context for understanding what the information in the financial statements, notes disclosures, and required supplementary information says about the Authority's overall financial health.

### CONTENTS

<b>Financial Trends</b>	<b>Pages</b>
These schedules contain information to help the reader understand how the Authority's financial performance and well-being have changed over time.	26-31
<b>Revenue Capacity</b>	
These schedules contain information to help the reader assess the Authority's most significant local revenue source.	32-35
<b>Demographic and Economic Information</b>	
These schedules contain demographic and economic indicators to help the reader understand the environment within which the Authority's financial activities take place and help to make comparisons over time.	36-38
<b>Operating Information</b>	
These schedules contain information about the Authority's operation and resources to help the reader understand how the Authority's financial information relates to the services it provides and the activities it performs.	39-40

#### *Sources:*

*Unless otherwise noted, the information in these schedules is derived from the Comprehensive Annual Financial Reports for the relevant year.*



# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## NET POSITION BY COMPONENT Fiscal Years 2006-07 through 2015-16

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	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>
Net investment in capital assets	\$ 42,054,529	\$ 46,381,885	\$ 45,261,137	\$ 42,670,576
Restricted	9,605,031	10,427,134	10,631,218	10,974,915
Unrestricted	11,183,412	9,233,596	13,692,764	17,956,108
	<hr/>	<hr/>	<hr/>	<hr/>
Total activities net position	<u>\$ 62,842,972</u>	<u>\$ 66,042,615</u>	<u>\$ 69,585,119</u>	<u>\$ 71,601,599</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## NET POSITION BY COMPONENT

Fiscal Years 2006-07 through 2015-16

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<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
\$ 40,070,723	\$ 47,594,928	\$ 45,109,770	\$ 42,510,194	\$ 46,268,208	\$ 44,155,042
11,133,002	11,274,020	11,310,854	11,525,044	11,847,607	12,273,871
23,468,064	16,075,361	16,944,640	18,967,793	14,495,770	16,879,390
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<u>\$ 74,671,789</u>	<u>\$ 74,944,309</u>	<u>\$ 73,365,264</u>	<u>\$ 73,003,031</u>	<u>\$ 72,611,585</u>	<u>\$ 73,308,303</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TOTAL ANNUAL REVENUES Fiscal Years 2006-07 through 2015-16

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	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>
OPERATING REVENUES:				
Fees from landfill operations	\$ 23,698,177	\$ 22,420,727	\$ 20,216,998	\$ 19,872,062
Rental income	66,693	73,661	84,022	89,277
Miscellaneous income	<u>22,601</u>	<u>14,418</u>	<u>12,205</u>	<u>9,277</u>
Total operating revenues	<u>23,787,471</u>	<u>22,508,806</u>	<u>20,313,225</u>	<u>19,970,616</u>
NONOPERATING REVENUES:				
Grant revenue	46,954	-	84,451	116,935
Investment earnings	2,309,556	1,206,076	1,004,699	1,107,360
State aid	518	-	-	-
Gain on sale of capital assets	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total nonoperating revenues	<u>2,357,028</u>	<u>1,206,076</u>	<u>1,089,150</u>	<u>1,224,295</u>
TOTAL REVENUES	<u>\$ 26,144,499</u>	<u>\$ 23,714,882</u>	<u>\$ 21,402,375</u>	<u>\$ 21,194,911</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TOTAL ANNUAL REVENUES Fiscal Years 2006-07 through 2015-16

<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
\$ 20,013,373	\$ 19,756,721	\$ 20,317,631	\$ 20,423,095	\$ 21,482,481	\$ 23,219,364
80,059	101,630	102,935	130,691	136,210	121,259
139,557	339,231	334,882	120,851	70,137	96,017
<u>20,232,989</u>	<u>20,197,582</u>	<u>20,755,448</u>	<u>20,674,637</u>	<u>21,688,828</u>	<u>23,436,640</u>
190,683	145,635	123,333	70,680	70,571	82,122
661,534	645,123	382,588	901,928	614,791	868,222
-	-	-	-	-	-
-	-	-	-	50	-
<u>852,217</u>	<u>790,758</u>	<u>505,921</u>	<u>972,608</u>	<u>685,412</u>	<u>950,344</u>
<u>\$ 21,085,206</u>	<u>\$ 20,988,340</u>	<u>\$ 21,261,369</u>	<u>\$ 21,647,245</u>	<u>\$ 22,374,240</u>	<u>\$ 24,386,984</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TOTAL ANNUAL EXPENSES Fiscal Years 2006-07 through 2015-16

	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>
OPERATING EXPENSES:				
Solid waste contractor:				
MRF	\$ 10,343,814	\$ 9,909,732	\$ 9,617,623	\$ 9,815,655
Landfill	1,101,450	2,213,450	2,569,997	2,194,307
Landfill maintenance	2,308,032	2,939,601	-	803,629
Depreciation	931,765	873,662	1,120,854	2,598,761
Professional services - county	1,596,265	2,328,534	2,138,740	2,037,968
Landfill closure and postclosure care costs	441,208	782,276	546,088	339,015
Claims/litigation	-	-	213,152	-
Professional services - purchased	623,417	650,473	904,359	618,253
Special department expenses	459,006	412,648	384,037	395,427
Administration	105,746	141,094	191,435	182,928
General liability insurance	123,720	62,136	82,479	90,286
Utilities	43,507	27,495	29,838	43,645
Other expenses	82,973	57,453	61,269	58,557
Total operating expenses	<u>18,160,903</u>	<u>20,398,554</u>	<u>17,859,871</u>	<u>19,178,431</u>
NONOPERATING EXPENSES:				
Loss on disposal of capital assets	<u>-</u>	<u>116,685</u>	<u>-</u>	<u>-</u>
TOTAL EXPENSES	<u>\$ 18,160,903</u>	<u>\$ 20,515,239</u>	<u>\$ 17,859,871</u>	<u>\$ 19,178,431</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TOTAL ANNUAL EXPENSES Fiscal Years 2006-07 through 2015-16

<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
\$ 9,845,590	\$ 10,369,873	\$ 10,779,227	\$ 11,418,618	\$ 12,357,811	\$ 12,620,183
2,260,530	3,047,532	2,401,616	2,559,553	2,608,587	2,487,516
80,452	98,486	665,532	683,615	-	-
2,599,853	2,599,854	2,707,394	2,724,347	2,736,576	2,895,225
2,181,374	2,412,463	2,344,284	2,390,872	2,324,506	2,759,689
(448,907)	379,246	2,222,581	435,621	368,306	446,806
-	-	-	-	-	-
660,485	938,153	786,218	808,780	1,290,123	1,480,954
427,636	440,913	438,300	486,813	597,467	507,808
179,302	198,968	234,323	211,344	184,833	180,041
86,867	89,021	99,112	108,708	113,192	111,169
66,798	61,813	68,970	82,091	86,555	94,166
75,036	79,498	92,857	99,116	97,730	106,709
<u>18,015,016</u>	<u>20,715,820</u>	<u>22,840,414</u>	<u>22,009,478</u>	<u>22,765,686</u>	<u>23,690,266</u>
-	-	-	-	-	-
<u>\$ 18,015,016</u>	<u>\$ 20,715,820</u>	<u>\$ 22,840,414</u>	<u>\$ 22,009,478</u>	<u>\$ 22,765,686</u>	<u>\$ 23,690,266</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## CHANGES IN NET POSITION Fiscal Years 2006-07 through 2015-16

	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>
Operating Revenues:				
Fees from landfill operations	\$ 23,698,177	\$ 22,420,727	\$ 20,216,998	\$ 19,872,062
Rental income	66,693	73,661	84,022	89,277
Miscellaneous income	<u>22,601</u>	<u>14,418</u>	<u>12,205</u>	<u>9,277</u>
Total operating revenues	<u>23,787,471</u>	<u>22,508,806</u>	<u>20,313,225</u>	<u>19,970,616</u>
Nonoperating Revenues:				
Grant revenue	46,954	-	84,451	116,935
Investment earnings	2,309,556	1,206,076	1,004,699	1,107,360
State aid	518	-	-	-
Gain on sale of capital assets	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total nonoperating revenues	<u>2,357,028</u>	<u>1,206,076</u>	<u>1,089,150</u>	<u>1,224,295</u>
Total revenues	<u>26,144,499</u>	<u>23,714,882</u>	<u>21,402,375</u>	<u>21,194,911</u>
Total expenses	<u>18,160,903</u>	<u>20,515,239</u>	<u>17,859,871</u>	<u>19,178,431</u>
Change in net position	<u>7,983,596</u>	<u>3,199,643</u>	<u>3,542,504</u>	<u>2,016,480</u>
Net position, beginning of year	<u>54,859,376</u>	<u>62,842,972</u>	<u>66,042,615</u>	<u>69,585,119</u>
Net position, end of year	<u>\$ 62,842,972</u>	<u>\$ 66,042,615</u>	<u>\$ 69,585,119</u>	<u>\$ 71,601,599</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## CHANGES IN NET POSITION Fiscal Years 2006-07 through 2015-16

<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>
\$ 20,013,373	\$ 19,756,721	\$ 20,317,631	\$ 20,423,095	\$ 21,482,481	\$ 23,219,364
80,059	101,630	102,935	130,691	136,210	121,259
139,557	339,231	334,882	120,851	70,137	96,017
<u>20,232,989</u>	<u>20,197,582</u>	<u>20,755,448</u>	<u>20,674,637</u>	<u>21,688,828</u>	<u>23,436,640</u>
190,683	145,635	123,333	70,680	70,571	82,122
661,534	645,123	382,588	901,928	614,791	868,222
-	-	-	-	-	-
-	-	-	-	50	-
<u>852,217</u>	<u>790,758</u>	<u>505,921</u>	<u>972,608</u>	<u>685,412</u>	<u>950,344</u>
<u>21,085,206</u>	<u>20,988,340</u>	<u>21,261,369</u>	<u>21,647,245</u>	<u>22,374,240</u>	<u>24,386,984</u>
<u>18,015,016</u>	<u>20,715,820</u>	<u>22,840,414</u>	<u>22,009,478</u>	<u>22,765,686</u>	<u>23,690,266</u>
<u>3,070,190</u>	<u>272,520</u>	<u>(1,579,045)</u>	<u>(362,233)</u>	<u>(391,446)</u>	<u>696,718</u>
<u>71,601,599</u>	<u>74,671,789</u>	<u>74,944,309</u>	<u>73,365,264</u>	<u>73,003,031</u>	<u>72,611,585</u>
<u>\$ 74,671,789</u>	<u>\$ 74,944,309</u>	<u>\$ 73,365,264</u>	<u>\$ 73,003,031</u>	<u>\$ 72,611,585</u>	<u>\$ 73,308,303</u>

Source: Audited Financial Statements for Fiscal Years 2006-07 through 2015-16



# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## SCHEDULE OF CURRENT TIPPING FEES

Fiscal Year 2015-16

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Category	Tipping Fees
Municipal Solid Waste	\$69.00/ton \$14.00/cy
Construction and Demolition Debris	\$47.00/ton \$14.00/cy
Sludge and Mixed Inerts <sup>1</sup>	\$33.00/ton
Commercial Food Waste	\$40.00/ton
Source Separated Green Waste	\$36.50/ton \$7.00/cy
Source Separated Wood Waste <sup>2</sup>	\$26.00/ton \$7.00/cy
Inert Materials <sup>3</sup>	\$16.00/ton \$14.00/cy
Water Treatment Plant Sludge	\$7.50/ton
Refrigerated Appliances	\$30.00 each
Non-refrigerated Appliances	\$5.00 each
Car and Light Truck Tires	\$3.00 each
Semi-trailer Tires	\$17.50 each
Tractor Tires	\$70.00 each
Euclid & Bulk Tires	\$175.00/ton

<sup>1</sup> Applies to loads that qualify as Inert Materials but contain the presence of a small amount of contaminants.

<sup>2</sup> Applies to separated loads of wood, including: lumber, plywood, particleboard, and tree trunks and limbs less than 24 inches in diameter and greater than 1 inch in diameter. Loads can contain no more than 1% of contaminants. Contaminants include treated or painted wood.

<sup>3</sup> Applies to separated loads of dirt, rock, asphalt and concrete if free from rebar or mesh and broken into pieces less than 2' x 2' x 4'.

Source: Western Placer Waste Management Authority

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TEN LARGEST PRINCIPAL CUSTOMERS

As of June 30, 2016 and June 30, 2007

	June 30, 2016		June 30, 2007	
	Tipping Fees	% of Total Tipping Fee Revenue	Tipping Fees	% of Total Tipping Fee Revenue
Recology	\$ 8,980,074	38.68%	\$ 9,825,179	41.45%
City of Roseville	8,034,197	34.60%	7,534,552	31.79%
Cash Customer	3,547,804	15.28%	3,010,966	12.71%
City of Lincoln	1,716,661	7.39%	1,521,950	6.42%
Atlas Disposal Industries	280,716	1.21%	120,607	0.51%
North Cal Hauling Company	132,618	0.57%	-	-
Placer County - Utilities	66,375	0.29%	75,200	0.32%
OMI, Inc.	57,142	0.25%	66,731	0.28%
Allied Waste Services	56,676	0.24%	-	-
Waste Management, Inc.	47,011	0.20%	-	-
A Teichert & Sons, Inc.	-	-	237,229	1.00%
Cedar Valley Concrete	-	-	165,388	0.70%
C & R Landscape	-	-	115,084	0.49%
Ten Largest Principal Customers	\$ 22,919,274	98.71%	\$ 22,672,886	95.67%
All Other Customers	300,090	1.29%	1,025,291	4.3%
Total	\$ 23,219,364	100.00%	\$ 23,698,177	100.00%

Source: Western Placer Waste Management Authority

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## CUSTOMER ACCOUNTS

Fiscal Years 2006-07 through 2015-16

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<b>Fiscal Year</b>	<b>Number of Customer Accounts</b>	<b>Annual % Increase (Decrease)</b>
2006-07	349	8%
2007-08	350	0%
2008-09	336	-4%
2009-10	313	-7%
2010-11	294	-6%
2011-12	278	-5%
2012-13	269	-3%
2013-14	275	2%
2014-15	274	0%
2015-16	272	-1%

Source: Western Placer Waste Management Authority

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## DEMOGRAPHIC AND ECONOMIC STATISTICS LAST TEN YEARS (Dollars in Thousands)

Calendar Year	Population <sup>(1)</sup> (in thousands)	Personal Income <sup>(2)</sup>	Per Capita Personal Income <sup>(3)</sup>	School Enrollment <sup>(4)</sup>	Unemployment Rate <sup>(5)</sup>
2006	322	15,234,777	47	63,742	4.2%
2007	330	15,955,562	48	64,401	4.8%
2008	338	16,670,183	49	65,708	6.4%
2009	344	16,085,139	47	67,088	10.4%
2010	351	16,725,085	48	67,966	11.4%
2011	351	17,932,119	51	68,278	10.7%
2012	355 <sup>(6)</sup>	19,004,105	54	68,813	9.3%
2013	357 <sup>(6)</sup>	20,174,068	57	69,831	7.6%
2014	366 <sup>(6)</sup>	21,182,771	58	70,141	6.0%
2015 <sup>(a)</sup>	369 <sup>(6)</sup>	21,240,299 <sup>(b)</sup>	58	70,496	5.0% <sup>(c)</sup>

**Note:**

(a) 2015 is the most recent information available.

(b) Estimated 5% increase in personal income

(c) Unemployment rate is 4.8% as of June 30, 2016

**Sources:**

(1) State of California, Department of Finance, E-2 California County Population Estimates Revised as of July 1

(2) & (3) U.S. Department of Commerce: Bureau of Economic Analysis - Local Data

(4) California Department of Education (Dataquest), K-12 Public School Enrollment for the County of Placer

(5) California State Employment Development Department (annual averages, not seasonally adjusted)

(6) State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State as of January 1.

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## TEN LARGEST EMPLOYERS As of June 30, 2016 and June 30, 2007

2016			2007		
Company or Organization	Placer County Employees	Percentage of Total Employment <sup>(1)</sup>	Company or Organization	Number of Employees	Percentage of Total Employment
Sutter Health	5,435	3.17%	Hewlett-Packard Co.	3,800	2.31%
Kaiser Permanente	5,361	3.13%	County of Placer	3,092	1.88%
County of Placer	2,700	1.58%	Sutter Health	2,605	1.58%
Squaw Valley Alpine Meadows	2,500	1.46%	Kaiser Permanente	2,418	1.47%
Hewlett-Packard Co.	2,100	1.23%	PRIDE Industries	1,429	0.87%
Sierra Joint Community College District	1,940	1.13%	Union Pacific Railroad Co., Inc.	1,324	0.81%
Thunder Valley Casino Resort	1,915	1.12%	City of Roseville	1,243	0.76%
PRIDE Industries	1,155	0.67%	Raley's Inc.	1,195	0.73%
Union Pacific Railroad Co., Inc.	1,091	0.64%	Roseville Joint High School District	1,018	0.62%
City of Roseville	1,067	0.62%	Dry Creek Joint Elementary School District	992	0.60%

**Note:**

<sup>(1)</sup> Ranked by number of employees in full-time equivalents as published by the Sacramento Business Journal on June 8, 2016.

**Sources:**

Sacramento Business Journal

California State, Employment Development Department (total employment as of June 2016, not seasonally adjusted)

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## OPERATING INDICATORS

Fiscal Years 2006-07 through 2015-16

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<b>Fiscal Year</b>	<b>Tonnage Disposed at Western Regional Sanitary Landfill</b>	<b>Percentage of Diversion Recycled Waste</b>
2006-07	266,262	40%
2007-08	239,133	43%
2008-09	220,587	43%
2009-10	205,706	44%
2010-11	207,159	43%
2011-12	198,499	45%
2012-13	211,417	43%
2013-14	216,266	42%
2014-15	232,072	41%
2015-16	248,748	39%

Source: Western Placer Waste Management Authority

# WESTERN PLACER WASTE MANAGEMENT AUTHORITY

## SCHEDULE OF ANNUAL REFUSE TONNAGE

Fiscal Years 2006-07 through 2015-16

Fiscal Year	Delivered by				Total Tonnage	Annual % Increase (Decrease)
	Recology	City of Roseville	City of Lincoln	Other Entities		
2006-07	168,646	131,687	24,085	121,808	446,226	-4.65%
2007-08	160,641	125,055	24,997	105,900	416,593	-6.64%
2008-09	145,236	120,134	25,331	94,620	385,321	-7.51%
2009-10	140,666	117,430	25,231	85,438	368,765	-4.30%
2010-11	139,499	120,433	25,385	80,165	365,482	-0.89%
2011-12	138,195	118,103	25,414	81,056	362,768	-0.74%
2012-13	140,914	121,390	26,522	83,358	372,184	2.60%
2013-14	142,117	119,435	26,331	83,391	371,274	-0.24%
2014-15	148,698	122,143	26,716	94,390	391,947	5.57%
2015-16	154,341	125,890	27,735	102,393	410,359	4.70%

Source: Western Placer Waste Management Authority



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL  
REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT  
OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE  
WITH GOVERNMENT AUDITING STANDARDS**

Board of Directors  
Western Placer Waste Management Authority  
Auburn, California

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Western Placer Waste Management Authority (Authority) as of and for the year ended June 30, 2016, and the related notes to the financial statements, and have issued our report thereon dated December 16, 2016. Our report included an emphasis of matter paragraph regarding the County's adoption of Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*, effective July 1, 2014.

**Internal Control Over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

*A deficiency in internal control exists* when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.



## Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose

*Vavrinik, Trine, Day & Co. LLP*

Sacramento, California  
December 16, 2016



Board of Directors  
Western Placer Waste Management Authority  
Auburn, California

We have audited the financial statements of the Western Placer Waste Management Authority (the Authority) for the year ended June 30, 2016. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated October 3, 2016. Professional standards also require that we communicate to you the following information related to our audit.

### Significant Audit Findings

#### *Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Authority are described in Note 2 to the financial statements. As described in Note 2 to the financial statements, the Authority adopted Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application*, effective July 1, 2014. We noted no transactions entered into by the Authority during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimate affecting the Authority's financial statements was:

Management's estimate of the Landfill Closure and Postclosure cost estimate is based on the Technical Document submitted to the state regulatory agency, a cost inflation factor, and an evaluation of the percentage of capacity used as of June 30, 2016. We evaluated the key factors and assumptions used to develop the estimate of Landfill Closure and Postclosure costs in determining that it is reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The concentration of volume of business was considered a sensitive matter affecting the financial statements and was disclosed in footnote 8:

Recology Auburn Placer (formerly Auburn Placer Disposal) and the City of Roseville are the major customers of the landfill and constitute approximately 81.57% and 78.55% of the accounts receivable balance and 73.28% and 71.85% of total fees from landfill operations as of June 30, 2016 and 2015, respectively.

The financial statement disclosures are neutral, consistent, and clear.

#### *Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

### *Corrected Misstatements*

Professional standards require us to communicate to you all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. The misstatements that we identified as a result of our audit procedures were brought to the attention of, and corrected by, management are attached in the Schedule of Corrected Misstatements.

### *Disagreements with Management*

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

### *Management Representations*

We have requested certain representations from management that are included in the management representation letter dated December 16, 2016.

### *Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Authority's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

### *Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Authority's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

### **Other Matters**

We applied certain limited procedures to management's discussion and analysis, which is required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were not engaged to report on the Introductory and Statistical sections, which accompany the financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on it.

### **Restriction on Use**

This information is intended solely for the use of Board of Directors and management of the Authority and is not intended to be, and should not be, used by anyone other than these specified parties.

*Vavrinick, Trine, Day & Co. LLP*

Sacramento, California  
December 16, 2016

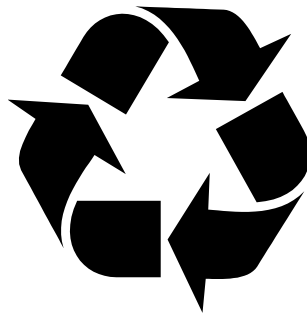
**WESTERN PLACER WASTE MANAGEMENT AUTHORITY**  
**Schedule of Corrected Misstatements**  
**For The Fiscal Year Ended June 30, 2016**

<b>Number</b>	<b>Account/Description</b>	<b>Debit</b>	<b>Credit</b>
1	Depreciation expense	\$ 87,392	
	Accumulated depreciation		\$ 87,392

*Adjustment to correct the depreciation expense for the landfill liner.*

**MATERIALS RECOVERY FACILITY  
QUARTERLY OPERATIONS REPORT  
TO  
WESTERN PLACER WASTE MANAGEMENT  
AUTHORITY**

**1<sup>ST</sup> QTR, 21<sup>ST</sup> OPERATING YEAR  
ENDING SEPTEMBER 30<sup>TH</sup>, 2016**



**NORTECH WASTE LLC  
3033 FIDDYMENT ROAD  
ROSEVILLE, CA 95747  
916-645-5230**

**OPERATIONS REPORT**  
**Materials Recovery Facility Operation**  
Quarter Ending September 30<sup>th</sup>, 2016 (1<sup>st</sup> Qtr. 21<sup>st</sup> Operating Year)

**PROCESSED TONNAGE AND RECOVERY LEVEL:**

**Processed Tonnage:** Nortech processed 83,586 tons through the Materials Recovery Facility (MRF) during the quarter. Of this, 58,212 tons were municipal solid waste, 10,772 tons were source separated green waste, 622 tons were source separated wood waste and 13,979 tons were construction and demolition waste.

**Recovery Level:** Overall recovery for the quarter was 39.02%. Creditable recovery for the Materials Recovery Facility was 24.3% or 2.3% above the guaranteed minimum recovery level of 22%. Creditable recovery for Construction and Demolition waste was 47.05% or 2.95% below the guaranteed minimum recovery level of 50%.

**MECHANICAL PERFORMANCE OF THE MRF:**

The plant operated at 87.37% mechanical up time (447.15 hours out of 511.8) during the quarter. Electrical, mechanical and other problems are maintained in spreadsheets for easy assessment of reoccurring problems and are available for Authority staff for review.

**STAFFING:**

Staffing for the period averaged 202 full time equivalent employees. The permanent, full time staff averaged 124, and contract service employees averaged 78. Approximately 3% of employees were employed on the Tipping Floor, 36% on the Sort Line, 6% in Finished Product, 2% in Buyback, 1% in Composting, 15% in C&D, 3% in HHW, 14% in Maintenance, 6% in Clean Up, 3% in House & Yard, 5% in Administration, 3% in Transportation, and 2% in Public Receiving.

**SPECIAL OCCURRENCES:**

As of June 1<sup>st</sup>, 2016, special occurrences are now reported to the Authority on a daily basis by designated Nortech staff. A summary of the special occurrences that occurred this quarter are summarized below. While additional details on each occurrence have previously been reported to Authority staff, some additional details have been described below for convenience purposes.

<b>Item</b>	<b>Date</b>	<b>Location</b>	<b>Occurrence</b>
1.	7/3/16	Yard	Nortech truck hit a storage bin
2.	7/12/16	Sort Line	Employee stuck by possible needle
3.	7/31/16	New HHW	A rag caught fire
4.	8/7/16	Z-Wall	Loader hit fire hydrant
5.	8/13/16	Scale House 2	Nortech truck driver clipped gutter on scale house
6.	8/30/16	Sort Line	Medical waste found on line
7.	9/17/16	Z-Wall	A customer injured his finger while unloading
8.	9/21/16	Scale House	A Nortech employee was struck by a truck at the scale house

1. No employee or customer injuries as a result of this incident.
2. No additional information.
3. The fire was very small and immediately put out. No employee or customers injuries were sustained; no property damage occurred as a result.
4. No employee or customer injuries as a result of this incident.
5. No employee or customer injuries as a result of this incident; the gutter has since been repaired by Nortech Maintenance staff.
6. The medical waste was carefully removed from the line and stored until the California Medical Waste Management Program determined that it was household medical waste that did not need to be reported to them. The waste was then properly handled by the HHW Department.
7. A customer was unloading his vehicle at the Z-Wall when he smashed his finger between a fence post with concrete still attached to one end and the metal rack on the bed of his truck. Blood was observed coming from the man's finger. The customer stated that Nortech did not do anything to cause his injury. An ambulance was called by a Spotter at the request of the customer. The customer left with the ambulance.
8. The employee received minor scrapes on his arm as a result of the incident and did not need medical attention.

#### **SALES:**

Sales totaled 32,120 tons for the quarter. Sales in tons and average price by major commodity were:

<b><u>Commodity</u></b>	<b><u>Tons</u></b>	<b><u>Average Price P/T</u></b>
ADC	7,625	\$0.00
Aluminum Cans	111	\$4,275.83
Aluminum Scrap	53	\$470.38
Batteries	30	\$443.36
Cardboard	2,372	\$128.64
Compost	2,838	\$20.98
Compost Overs	965	\$5.93
CRTs	82	\$220.00
E-Waste	29	\$91.96
Film Plastic	4	\$140.00
Glass	668	\$112.06
HDPE-Colored	145	\$365.35
HDPE-Natural	88	\$946.66
Inerts	911	\$0.00
Misc HHW Disposal	152	\$0.00
Misc Recyclables	94	-\$2.15 <sup>2</sup>
Mixed Rigid Large	483	\$106.17
Mixed Rigid Small	0.31	\$11,512.55 <sup>3</sup>

<sup>2</sup> The Miscellaneous Recyclables category may be comprised of various commodities. Sheetrock material is the only commodity represented in this category this quarter. Price per ton is a negative value due to trucking charges incurred to ship the commodity.

<sup>3</sup> The average price per ton for this commodity is high due to a State of California redemption payment received for a CRV material that is collected 12 months out of the year, but only claimed for State of California redemption once annually when it is sold due to such small quantities collected throughout the year.

<b>Commodity</b>	<b>Tons</b>	<b>Average Price P/T</b>
Mixed Waste	575	\$104.81
Newspaper	223	\$131.99
PET	512	\$4,743.5
Rock-Crushed	23	\$7.79
Scrapping Material	51	\$426.76
Steel	2,824	\$75.80
Used Oil	0.57	\$263.16
Wood Chips	4,236	\$1.41

#### **TRAINING:**

- New Hire Safety Orientation – 19 employees
- Continued Forklift/Loader training and certification
- Lockout/Blockout training
- Company-wide Safety Orientation
- Annual company-wide Bloodborne Pathogen
- Annual company-wide Hazard Communication Training
- Department Tailgate Topics:
  - Fire Extinguisher Safety training
  - Annual Heat Illness Prevention training
  - Traffic Around Heavy Equipment
  - Wearing Proper PPE

#### **HEALTH AND SAFETY:**

There were 11 reportable injuries for the quarter. There were zero days lost time and 11 restricted duty days. The injuries are:

<b>Date</b>	<b>Position</b>	<b>Location</b>	<b>Incident</b>
9/13/2016	Loader Operator	Z-Wall, Truck	Left hand, pinky finger, laceration
9/2/2016	Maintenance Supervisor	Trommel	Right chest, Contusion
8/25/2016	Sorter	Sort line, C-64	Right hand, thumb, needlestick
8/15/2016	Baler Operator	Baler	Left hand, pinky finger, jammed
8/3/2016	Sorter	Sort line	Right hand, puncture
7/27/2016	Maintenance Laborer	MRF, C-80	Left foot, nail puncture
7/26/2016	Sorter	Sort line	Left shoulder, strain
7/15/2016	Mechanic Apprentice	MRF, up on sort line	Laceration, Right Hand
7/12/2016	Sorter	Sort Line	Needle Stick
7/11/2016	Maintenance Supervisor	Machine Shop	Right eye, cornea, foreign body
7/6/2016	Maintenance Supervisor	New American Baler	Lumbar sprain

#### **REGULATORY COMPLIANCE:**

No violations were received by the LEA during the quarter. There were two Areas of Concern noted by the LEA in August for litter control along North Foothills Blvd. and Athens Ave., as well as railing repair at public tipping area; both concerns were immediately corrected. The LEA noted that there were no significant odors at compost during his inspections.



**HOUSEHOLD HAZARDOUS WASTE PROGRAM:**

A comprehensive report is submitted monthly to Authority staff that identifies types and quantities of materials, origin of persons using the facility, materials recycled, etc. In summary, 5,834 customers used the facility during the quarter, 32,385 gallons of liquid waste were processed, 21 tons of lead acid batteries were recycled and 16 tons of household batteries were recycled.

**SUMMARY:**

Plant operations during the quarter have been consistent with normal operations.

Respectfully Submitted,

Paul Szura  
General Manager  
Nortech Waste, LLC

PRS:bt

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October 15, 2016

Western Placer Waste Management Authority  
Attn: Keith Schmidt, P.E.  
11476 C Avenue  
Auburn, CA 95603

**RE: NLI Quarterly Landfill Operations Report – 1<sup>st</sup> Quarter of the 8<sup>th</sup> Operating Year in 2016 (July, August, September)**

Dear Mr. Schmidt,

Pursuant to Section 8.4 “Quarterly Reporting” of the Agreement between the Western Placer Waste Management Authority (Authority) and Nortech Landfill, Inc. (NLI) for operation of the Western Regional Sanitary Landfill (WRS�), NLI submits the following summary of operational activities conducted by NLI during the 1<sup>st</sup> quarter of the 8<sup>th</sup> operating year – July, August, and September, 2016.

Operations

Filling operations consisted primarily of placing waste in Module 5. Other operations included the placement of intermediate and cap cover on Module 16, gas line and liner cover in Module 5, and winter pad construction. An estimated 3,219 CY of soil was used as cap cover on Module 16; 636 CY of soil and 164 CY of crushed rock as gas line cover in Module 5; 1,148 CY of soil for liner cover in Module 5; and 1,395 CY of crushed rock in winter pad construction. An additional 1,005 CY of soil was relocated from Module 5 to Module 6 for road material in September.

Inspections

Daily load checking and random inspections were performed during the quarter. No hazardous waste was found. The operator returned 5.96 tons of recyclables that were recovered from the landfill during the quarter. Monthly site safety inspections were performed by NLI staff, and the Local Enforcement Agency (LEA) performed three random site inspections during the quarter. The LEA issued a Violation during the quarter concerning litter control along the road to the top of Module 16. The LEA noted that litter had greatly improved at the previous Module 16 working face and surrounding areas. Copies of all inspection reports are included in the NLI operating reports that are submitted to the Authority each month.

Cover Soil Utilization

NLI continues to use tarps, and reuse cover soil in order to minimize the burial of operational material. In addition, NLI uses Alternative Daily Cover (ADC) to maximize Materials Recovery Facility diversion rates and reduce the Authority’s tax liability. These combined activities resulted in an average waste to operational material ratio of

**Nortech Landfill, Inc.**

3033 Fiddymment Road \* Roseville, CA \* (916) 645-5230 \* Fax (916) 645-5234

4.33:1. Although lower than the 5:1 waste to operational material ratio listed in the contract, NLI is still meeting the intent of the contract by minimizing the quantity of soil and inert material to conserve air space. NLI could use less ADC but would then need to bury the ADC as residue and increase the amount of soil used.

#### Tonnages

The following table includes a summary of buried waste and operational material consumed at the WRS� for the quarter.

Month	Taxable Buried Waste (Tons)	Estimated Taxable Buried Waste (CY)*	Operational Material Utilized (CY)			Waste to Operational Material Ratio (CY)**	
			ADC	Soil	Inert	W/ADC	W/O ADC
<b>July</b>	20,425	43,330	3,417	3,153	500	5.98:1	12.8:1
<b>August</b>	22,596	22,022	3,723	2,911	144	3.13:1	8.43:1
<b>September</b>	21,084	32,476	3,600	2,973	1,251	3.89:1	7.9:1
<b>TOTAL</b>	<b>64,105</b>	<b>97,828</b>	<b>11,740</b>	<b>9,037</b>	<b>1,895</b>	<b>4.33:1</b>	<b>9.71:1</b>

Note: \*Estimated Taxable Buried Waste (CY) Calculated by using monthly surveyed volumes collected by NLI and subtracting the Total Operational Material Utilized

\*\*Ratio Calculated by Estimated Taxable Buried Waste divided by Total Operational Material (Volume surveyed for the quarter: **119,500 CY**)

#### Compaction Results

NLI has equipped their compactor with a global positioning system (GPS) to track the amount of airspace consumed by waste each day. For the quarter, the total airspace consumed as provided by GPS survey was 119,500 cubic yards (CY). Using the scale house records of waste tonnage received and the GPS total airspace consumed, the average density of the buried waste was calculated to be 1,142 lbs/CY, which is between the contractual range of 1,100 to 1,200 lbs/CY.

Please let me know if you require any further assistance regarding this report.

Sincerely,

Paul Szura  
Contractor's Representative  
Nortech Landfill, Inc.

PRS:bt

**Nortech Landfill, Inc.**

3033 Fiddymment Road \* Roseville, CA \* (916) 645-5230 \* Fax (916) 645-5234

**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM / KEITH SCHMIDT** *KS*  
SUBJECT: **QUARTERLY WPWMA ENGINEER'S REPORT**

**RECOMMENDED ACTION:**

None. This report is for information purposes only.

**BACKGROUND:**

This report summarizes the WPWMA's operations from July to September 2016.

**MRF and Landfill Operations**

MRF recovery rates since 2015 have continued to trend lower than previous years. The market value for recyclable commodities has declined due primarily to lower oil prices and limited ability to send recovered wood to nearby biomass facilities. Over the past year, several of these biomass facilities have begun shutting down or transitioning to processing predominately forest waste. While Nortech met the contractual recovery rate for MSW this quarter, they were slightly below the contractual level for C&D. Staff will continue to monitor this situation, however as these performance measures are evaluated on an annual basis, Nortech still has the capability to meet the performance standards prior to the end of the fiscal year.

Nortech Landfill, Inc. (NLI) buried waste in Module 5 and spread final cover soil in Module 16. Landfill compaction rates for the quarter were lower than the 2013-2016 quarters but continue to exceed the minimum rates specified in the Landfill Operating Agreement. Compaction rates typically decrease slightly when laying the initial lifts of refuse in a new module as NLI was doing this quarter.

The Local Enforcement Agency (LEA) noted an Area of Concern (AOC) and later a Notice of Violation (NOV) for onsite litter control on the landfill access road and completed areas of Module 16, and offsite litter control along North Foothills Blvd. and Athens Ave. The LEA also noted an AOC for the condition of the safety railings at the public tipping area. Nortech resolved the issues by the time the LEA conducted its October site review. The LEA also noted an AOC regarding the trees along the south side of the expanded compost facility. The WPWMA resolved the AOC by replanting the trees by the December 1, 2016 deadline given by the LEA.

**Environmental and Regulatory Compliance**

The two NOV's issued by the Central Valley Regional Water Quality Control Board related to the adequacy of the groundwater and soil vapor monitoring system are being actively resolved via construction of additional monitoring points in the groundwater and the soil above it.

## **Landfill Gas**

As reported to your Board at the June and July 2016 Board meetings, detection of a subsurface oxidation event (Event) has affected landfill gas operations and required our operator (Cornerstone) to turn off all landfill gas wells in the northern area of the landfill (i.e. Modules 1, 2, 10 and 11). Despite the reduced gas extraction, the measured methane levels in all LFG probes were within regulatory limits during the quarter.

Overall landfill gas flow rates were consistent during the third quarter of 2016 although much lower than the average flow of 2015, mostly due to impacts from ongoing landfilling operations. Several wells were disconnected early in the second quarter in Modules 14 and 15 to allow NLI to bury waste in those areas. Once Module 14 and 15 filling was complete, the wells were reconnected via construction Change Order 8 to the Module 5 Liner project mentioned elsewhere in this agenda and landfill gas flows increased.

## **Water Quality**

The results included in the Third Quarter 2015 Water Quality Monitoring Report continue to suggest that shallow groundwater in the north-central portion of the site was previously impacted by LFG. It appears some smaller, additional impacts have been observed and are associated with recent LFG collection system fluctuations. Staff anticipates the effect of the planned LFG collection system improvements will be apparent in the water quality results in the upcoming quarters.

The impacted water appears to be slowly moving south consistent with the natural flow of groundwater. It remains within the WPWMA's property and is not expected to reach the southern property border for over 100 years at its current flow rate. The southernmost water quality wells continue to suggest the groundwater leaving the WPWMA's property is clean.

As mentioned the Fourth Quarter 2015 WPWMA Engineer Report, the Water Board adopted a State-wide general permit for composting facilities (Compost Order) and is requiring the WPWMA to permit the composting facilities via this new Compost Order. Some physical improvements to the WPWMA composting facilities will be required to fully comply with the Compost Order. Staff will return to your Board later this year if partial compliance can be attained through minor modifications. Otherwise, staff intends to address this issue as part of the upcoming facility expansion planning effort.

## **Odors**

The WPWMA received 13 odor notifications on 10 separate days in the third quarter of 2016 compared to 48 notifications on 23 separate days in the second quarter. Data from the WPWMA's continuous odor monitoring system suggests that of the 13 notifications, 5 appear to have been primarily related to odors from the WPWMA's facilities, 1 could have been a combination of WPWMA and off-site sources, and the remaining 7 were likely related to sources other than the WPWMA's facilities. Of the instances where the WPWMA's facility was identified as contributing to the reported

odor condition, the model suggests that the landfill and landfill gas were the most likely sources of the odors.

### **Energy 2001 Landfill Gas-to-Energy Facility**

The WPWMA earned \$3,051 in rent and approximately \$37,012 in royalties during the quarter. These royalties are less than anticipated due to a decline in gas delivery rates. In September 2016, the WPWMA solicited bids for construction of extensive landfill gas system improvements that will substantially increase the landfill gas delivery rates. The project is currently under construction.

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**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**                      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM / STEPHANIE ULMER** *SM*  
SUBJECT: **2016 AUBURN HHW COLLECTION EVENT SUMMARY**

**RECOMMENDED ACTION:**

None. This report is for information purposes only.

**BACKGROUND:**

In addition to the WPWMA's permanent Household Hazardous Waste (HHW) facility, the WPWMA has conducted annual HHW collection events in the Auburn area since 2003 as a more convenient disposal option for residents located between Loomis and Colfax. Use of the permanent facility as well as participation in the annual events is free to Placer County residents; disposal costs apply to businesses.

On August 11, 2016, your Board approved an Agreement with 21<sup>st</sup> Century Environmental Management for HHW collection event services for 2016. The event was held Saturday and Sunday, October 29 and 30 at the Gold Country Fairgrounds in Auburn.

The 2016 event drew 887 participants and a total of 42,324 pounds of HHW and 20,000 pounds of electronic waste were collected. For purposes of comparison, the 2015 event served 430 participants and 36,030 pounds of HHW and 12,448 pounds of e-waste were collected. The attached Event History summarizes attendance, quantities collected and cost of previous events.

**FISCAL IMPACT:**

The FY 2016/17 Final Budget included \$65,000 for this event; the actual cost of the event was \$62,137. For purposes of comparison, the 2015 event cost \$49,893.

ATTACHMENT:    EVENT HISTORY

## HHW COLLECTION EVENT HISTORY

YEAR	PARTICIPANTS	HHW COLLECTED (pounds)	E-WASTE COLLECTED (pounds)	TOTAL EVENT COST	COST PER PARTICIPANT
2006	1,425	146,277	NA	\$97,680	\$68.55
2007	880	124,045	NA	\$92,650	\$105.28
2008	763	100,500	NA	\$80,610	\$105.65
2009	1,116	88,500	55,800	\$82,833	\$74.22
2010	1,231	99,000	40,000	\$85,181	\$69.20
2011	1,127	93,000	34,000	\$71,810	\$63.72
2012	758	73,000	26,500	\$56,595	\$74.66
2013	578	41,000	27,300	\$46,935	\$77.80
2014	1,076	77,600	21,300	\$61,733	\$57.37
2015	430	36,030	12,448	\$49,893	\$116.03
2016	887	42,324	20,000	\$62,137	\$70.05

**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**

DATE: **FEBRUARY 9, 2017**

FROM: **KEN GREHM / ERIC ODDO** 

SUBJECT: **WOODY BIOMASS GASIFICATION FEASIBILITY ANALYSIS**

**RECOMMENDED ACTION:**

None. This report is for information purposes only.

**BACKGROUND:**

At the January 8, 2015 meeting, your Board approved an agreement (Agreement) with Capitol Public Finance Group (CPFG) to develop a Landfill Gas Strategic Plan for the WPWMA. At the March 10, 2016 meeting, your Board approved the First Amendment to the Agreement which, in part, authorized CPFG to complete a study to determine whether it would be technically feasible and financially viable to generate electricity on-site for sale to PG&E via gasification of woody biomass. For the purposes of this study, available woody biomass was assumed to consist of wood recovered at the MRF and from the woody fraction that results after the finished compost is screened and prepared for market.

CPFG has completed the study, a copy of which is included as an attachment to this report. In summary, CPFG concluded that:

- Although the process could prove lengthy and difficult, the WPWMA has a reasonable chance of securing a power purchase agreement with PG&E through their BioMAT program. If an application from the WPWMA were accepted, it could provide a mechanism for sale of all generated electricity at a rate of 12.27 cents per kilowatt hour – a rate notably higher than current market conditions for electricity sales<sup>1</sup>.
- Sufficient woody biomass feedstock is likely available at the WPWMA's facility to support a 3 megawatt facility (the maximum size allowable under the BioMAT program) but that compatibility of the feedstock would need to be verified by the gasification equipment provider.
- While the technology for gasification of woody biomass has existed for some time, small scale gasification unit operating experience in North America is limited. A firm located in Woodland (West Biofuels, LLC) appears to have the technical capabilities to test and analyze the WPWMA's available feedstock and manufacture the necessary equipment.
- Given that the MRF operator controls the production and delivery of the feedstock that would be necessary for operation of the gasification system (and therefore would have the ability to divert portions of the feedstock to other end users if market conditions to do so were favorable), staff acknowledged that it

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<sup>1</sup> Energy 2001 currently earns 9.25 cents per kilowatt hour; as part of the Landfill Gas Strategic Plan economic analysis, CPFG suggested current market conditions for the sale of electricity may be in the range of 6.0 cents per kilowatt hour.

would be in the WPWMA's best interest to include the operation of a gasification system as part of the MRF contract. As a result, Nortech's full participation and support in pursuing woody biomass gasification would be a critical factor in determining the viability of the project.

- Given the currently poor economic conditions for marketing woody materials to other existing biomass facilities (e.g. Rio Bravo, Woodland Biomass), and assuming the WPWMA made the capital investment in the gasification equipment, the projected return on the WPWMA's investment (over a 15 year period) was deemed to be "moderate" to "fair", averaging approximately 2% per year.

During subsequent discussions, Nortech indicated to staff and CPFG that they intend to pursue the production and marketing of colored wood chips for use in landscaping applications and that they believed the market conditions for these products would exceed the historic value of wood marketed to Rio Bravo as biomass.

Given Nortech's position as noted above, the limited commercial experience of small scale gasification systems, the relatively high capital costs of the system and the potentially difficult process for obtaining a power purchase agreement with PG&E via the BioMAT program, CPFG was reluctant in recommending the WPWMA pursue a project. Staff concurs with CPFG's assessment and, at this time, is recommending the WPWMA not pursue a small-scale, on-site woody biomass gasification project.

ATTACHMENT: WOODY BIOMASS GASIFICATION FEASIBILITY REVIEW – FINAL REPORT

# GASIFICATION OF WOODY BIOMASS FEASIBILITY REVIEW

WESTERN PLACER WASTE MANAGEMENT AUTHORITY

SEPTEMBER 2016

Prepared by:



*2436 Professional Drive, Suite 300  
Roseville, CA 95661  
(916) 641-2734  
[www.capitolpfg.com](http://www.capitolpfg.com)*



*[www.tssconsultants.com](http://www.tssconsultants.com)*

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## 1.0 Introduction

This report examines the programmatic, technical and financial feasibility of the Western Placer Waste Management Authority (WPWMA) utilizing gasification of woody biomass accepted at their facility to generate electricity marketed through the BioMAT program. It concludes by offering recommendations and a tentative schedule for completing the recommended actions.

To carry out this review for WPWMA, Capitol PFG and TSS Consultants have gathered information from the following sources:

1. WPWMA management
2. Nortech Waste LLC management
3. Written reports<sup>1</sup>
4. Discussion with industry participants and experts
5. On-site tours with representatives of two different firms that offer gasification equipment and services
6. Placer County Air Pollution Control District representatives

Utilizing a small gasification unit to produce electricity from WPWMA biomass has potential advantages that include:

- The ability to obtain a long-term PPA from PG&E at a favorable price through the BioMAT program (discussed below)
- Production of potentially valuable biochar
- Finding a productive use for woody biomass after a potential collapse of the market for wood chips

WPWMA's ability to take advantage of the BioMAT program and produce a positive cash flow is enhanced because:

- The 3 MW limit for BioMAT corresponds well with the expected feedstock quantities available to WPWMA.
- There is room at WPWMA's existing developed site to add a gasification unit, generator set and transmission equipment.
- With expeditious action, it appears possible to compete in the program before all of the allocated capacity is committed.
- Nortech has a 24/7 presence on the property and may be able to utilize existing staff to run the gasifier.
- Nortech has seen the value and marketability of wood chips decrease significantly in recent months.
- Environmental review and permitting would likely not be onerous.

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<sup>1</sup> Primarily: "Biomass Gasification, Draft Interim Project Report", Public Interest Energy Research (PIER) Program, January 2015

## 2.0 Background

The Western Placer Waste Management Authority (WPWMA) is a Joint Powers Authority established by the County of Placer and the cities of Lincoln, Rocklin and Roseville in 1978 for the purposes of acquiring, owning, operating and maintaining a sanitary landfill and all related improvements for use by the Member Agencies.

In response to the California Integrated Waste Management Act of 1989 (Assembly Bill 939), the WPWMA elected to construct a mixed waste Materials Recovery Facility (MRF) to assist in achieving AB939's mandate of diverting solid waste from land disposal. The MRF began operations in 1995 and was designed, constructed and is operated to: 1) recover recyclable materials from mixed waste; 2) process green and wood wastes for composting or biomass; 3) purchase, receive and process source-separated recyclables from Participating Agencies and the public, and 4) provide for receipt and recycling/disposal of HHW.

MRF operations include separate municipal solid waste (MSW) and construction and demolition (C&D) processing facilities, a recycling buyback center, two HHW facilities, a vehicle maintenance shop, and green waste composting.

Urban wood waste is received by WPWMA in two ways: 1) source separated wood charged a fee of \$26 per ton at the WPWMA Scalehouse; and 2) wood recovered from mixed MSW at the mixed waste MRF, primarily from roll-off boxes that contain construction and demolition (C&D) materials (sorted outside), but also from mixed residential and commercial loads (sorted inside the MRF). For many years this wood has been chipped by Nortech Waste and hauled two miles to the Rio Bravo biomass plant. Rio Bravo has typically paid Nortech a fee of approximately \$12-\$18 per bone-dry ton for these wood chips. The type of wood chipped includes untreated dimensional lumber, plus resinated wood products such as plywood, oriented strand board, particleboard and fiberboard.

The so-called "compost overs" are another potential source of woody biomass. This material originates from green waste loads that were chipped and placed into windrows for aerobic composting. The "overs" consist of large chips and 3-12" branch segments from woody plant materials that failed to fully break down and were removed through the final screening process. A significant amount of finer material is also carried through during the screening. Nortech currently uses most of the compost overs as an erosion control material on the landfill; however, the WPWMA has some concern that such use may be adversely affecting stormwater sampling results. Re-running the overs through the composting operation is theoretically possible, but would add to expenses and could potentially upset the carbon to nitrogen ratio needed for composting. Unfortunately, compost overs are not ideal for biomass to energy plants due to their relatively high moisture content.

Table 1 shows the sources of woody biomass currently available at the WPWMA facilities.



Table 1

Current WPWMA Sources of Woody Biomass	
Source	Available Tons per year
Source-separated wood	2,400
Wood recovered from mixed loads	18,000
Compost Overs	18,000

The marketability of urban wood waste is facing an uncertain future due to the closure or anticipated closure of many large biomass plants throughout northern California as their long-term Power Purchase Agreements expire. Major utilities such as PG&E are finding solar and wind projects to be a cheaper source of “green” energy needed to meet their requirements under the Renewable Portfolio Standard; therefore, they are not offering biomass plants payments per mega-watt hour sufficient to support their operations. This is apparently true for the Rio Bravo plant near WPWMA, which has already severely cut back acceptance of wood from WPWMA and other providers. Its closure could result in: a) additional material directed to WPWMA from competing C&D operations, and b) a glut in the market for wood chips, including those used for landscaping purposes.

### 3.0 Programmatic Feasibility

#### 3.1 BioMAT Program

BioMAT, or the Bioenergy Market Adjusting Tariff, is a renewable energy feed-in tariff established by California Public Utilities Commission per the legislative mandate of Senate Bill 1122 (Rubio, 2012). SB 1122 recognized that biomass energy has value not reflected in existing electricity prices. BioMAT hopefully sets the price of electricity at a point where it becomes feasible for bioenergy projects to compete with cheaper energy sources like natural gas. BioMAT offers 10, 15 or 20-year power purchase agreements (PPAs) to purchase wholesale power generated from small renewable bioenergy projects sized up to 3 MW. PG&E has been allocated 30.5 MW of capacity in Category 1 (urban waste utilization), which includes biogas from wastewater treatment, municipal organic waste diversion (such as the use of woody biomass waste), food processing and co-digestion.

Table 2 summarizes the relevant programmatic requirements and WPWMA’s ability to satisfy those requirements.

Table 2

BioMAT Requirements	
BioMAT Requirement	WPWMA ability to satisfy
Fuel Resource Category	Feedstock meets Category 1 definition
3 MW limitation on generating capacity	Fits well with available feedstock
Tariff rate starting at \$0.127 per kWh	Depends on financial assumptions
PPA agreements of 10, 15 or 20 year periods	Yes
Within PG&E territory	Yes
Site control	Yes
Interconnection	Must complete System Impact Study
FERC Qualifying Facility	Yes, can meet the requirements for certification
Electrically independent and separately metered	Yes
24 months to achieve commercial operation	Yes, with proper management
Developer experience	Must utilize team that contains at least one member that has completed similar project

In addition, and critical to the assumptions used in this report, WPWMA must be the PG&E customer account holder in order to bid on BioMAT and enter into a PPA with PG&E. Nortech currently holds this status, so negotiations with Nortech must include agreement on this point.

Based on this review, it appears that WPWMA has the ability to meet all the BioMAT program requirements if the project is appropriately developed and managed.

### 3.2 BioMAT Application Process

The BioMAT program began with the first BioMAT Power Purchase Agreement (PPA) in the February 2016 Period 1 offering. Subsequent offer periods will occur every 60 days until February 2021 (or sooner if allocated megawattage is attained sooner).

A prospective BioMAT proposer prepares a Program Participation Request (PPR) to be submitted electronically to PG&E through their BioMAT Web Platform (<https://pgebiomat.accionpower.com/biomat/home.asp>). Once submitted, the PPR is reviewed by PG&E (within 20 business days) for determination of completeness. If deemed incomplete, the PPR is returned to the applicant for the necessary additional information needed and resubmittal to PG&E. Once the PPR is deemed complete, the proposer is eligible to participate in the Program Periods within its Fuel Resource Category, which as mentioned previously for a WPWMA project would be Category 1. The following supporting documentation is required with the PPR:

- Fuel use description
- Table of major components
- Facility layout drawing

- Single line drawing
- Legal description of the site
- Site Map

Although all of the supporting documentation is important, the single line drawing component is particularly important as this describes the interconnect aspects. All major equipment for electricity generation and interconnect must be described in detail. In most cases the interconnect equipment needed will be identified as part of the System Impact Study created for the Rule 21 interconnect process, an integral part of any BioMAT project (more detailed description in Section 3.4 below).

### 3.3 BioMAT Price Adjustment and Current Status

Market adjusting tariffs such as BioMAT have electricity purchase pricing intended to reflect the market response from applicable BioMAT Category applicants. BioMAT has started with a price of \$127.72 per megawatt hour as of February 2016 for all three categories (urban, agriculture, and forest biomass wastes). The price for each Category queue will independently adjust every two months. However, there is a market depth requirement for price adjustments:

- Initially, a price adjustment will only be triggered if there are 3 projects from 3 unaffiliated applicants in each Statewide Pricing Queue.
- After one project in a Statewide Pricing Queue accepts the BioMAT PPA price, a price adjustment will only be triggered if there are at least 5 projects from 5 unaffiliated applicants in each Statewide Pricing Queue.
- Pricing adjustment increments are \$4/MWhr, then \$8/MWhr, then \$12/MWhr, with a cap of \$12/MWhr. Thus, the adjustments could be:
  - Starting Price: \$127.72/MWhr
  - Adjustment 1: to \$131.72/MWhr
  - Adjustment 2: to \$139.72/MWhr
  - Adjustment 3: to \$151.72/MWhr
  - Adjustment 4: to \$163.72/MWhr

As of the BioMAT Program Period 3 (June 15, 2016), the status of BioMAT projects in their respective categories statewide is the following:

- Category 1 has less than 3 applicants (there is 1 qualified applicant – West Biofuels, gasification 0.5 MW) in the Statewide queue, so price has not adjusted;
- Category 2 has less than 3 dairy digester projects (there are no qualified applicants) in the Statewide queue, but there are now 3 unaffiliated, and qualified, non-dairy applicants (likely anaerobic digestion as the three only add up to 2 MW) and none have accepted the price of \$127.72/MWhr and so the price has adjusted upward to \$131.72/MWhr for the non-dairy applicants;
- Category 3 has less than 3 applicants (there is 1 qualified applicant – Collins Pine Company, direct combustion 3 MW) in the statewide queue, so price has not adjusted.

### 3.4 Interconnection Study Process

The interconnection study process is a very integral part of the BioMAT PPR process, as each project must be interconnected to the PG&E distribution system. The interconnection process for applicants is guided by Rule 21, which is essentially the same for each of the BioMAT IOUs. PG&E Rule 21 can be found at [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_RULES\\_21.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_21.pdf). Study options for BioMAT projects will generally be either the Fast Track Review, or the System Impact Study. The interconnect study process is initiated by an interconnection request to PG&E, whereby an initial review is conducted by PG&E to determine whether the Fast Track process or the SIS process is appropriate.

The Fast Track process is for smaller facilities that cause minimal impact on PG&E's electric system. Project proposals are accepted by PG&E throughout the year using a rolling application process and require a deposit of \$800. The Fast Track study process typically takes about three months and consists of 10 screens. If the Fast Track screens determine that your project does not meet the requirements for the process, an SIS will have to be performed.

The SIS study is much more in depth than a Fast Track review and can take 6 to 12 months to complete depending on complexity. The utility will also require an additional deposit of \$10,000<sup>2</sup>. The SIS study should indicate the cost of upgrading the system's interconnection facilities, distribution system and network, and what the applicant will have to pay in order to interconnect to PG&E's system. These costs can be high, particularly for the more remote Category 3 (forest biomass waste) projects.

In order to assist in the initial determination of whether a BioMAT project at the WPWMA facility would require a Fast Track Review or an SIS, a Rule 21 Pre-Application Report was requested from PG&E. For a fee of \$300, PG&E provided information about the current system at and near the WPWMA facility to assist in predicting the compatibility of a generation project. That report indicates, while a 3 MW woody biomass gasification facility can be compatible and there are no known constraints, a full System Impact Study is necessary for the project. As an alternative strategy, a Fast Track Review can be requested if the project developers would like to get an approximation of what interconnection costs might be in a shorter time frame than the full SIS. The cost of a Fast Track review is currently \$800.

The Pre-Application Report does not include a prediction of what interconnection costs might be; however one of the items reported on is the number of protective devices and voltage regulating devices between the WPWMA project site and the near substation. Multiple devices, such as the five mentioned in the Pre-Application report, could mean high interconnection costs. However, nothing is certain until the SIS is conducted.

It is highly recommended that WPWMA engage the services of an electrical engineering specialist or firm to assist in the interconnection process, due to its technical and procedural complexity. An electrical engineer can prepare the various applications for interconnection, and more importantly review and advise the WPWMA on the interconnection costs proposed by PG&E in the SIS. Although there are numerous electrical engineering firms familiar with

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<sup>2</sup> If the SIS performed by PG&E does not cost \$10,800 in personnel time, the remaining dollar amount would be refunded to the applicant.

the interconnection process, Electrical Power Systems, Inc.<sup>3</sup> has been retained by several proposed and current BioMAT projects.

It is also generally recommended that the engine gensets and associated equipment be selected before the SIS is conducted, because an equipment list must be given to PG&E at the initiation of the SIS. Changes in equipment after the SIS is conducted could result in voiding the findings and costs identified in the SIS by PG&E.

## 4.0 Technical Feasibility

### 4.1 Gasification of Woody Biomass to Produce Electricity

The proposed WPWMA BioMAT project will result in the generation of electricity via the gasification of woody biomass. Gasification systems generate electricity through transformation of the solid woody biomass into a synthetic gas, also known as “syngas”. This syngas is then combusted in an internal combustion (IC) engine generator set. Gasification is the thermochemical conversion of woody biomass into a syngas under controlled temperature and oxygen conditions. The woody biomass is not “burned” in a gasification system. The syngas is composed primarily of hydrogen (H<sub>2</sub>), methane (CH<sub>4</sub>), and carbon monoxide (CO), and has a heating value that ranges typically from one-fourth to one-half that of natural gas. Gasification also produces a biochar byproduct, which is valuable as a fertilizer and soil amendment, and serves as a highly effective carbon sequestration media.

The syngas produced by the gasifier is cleaned through wet scrubbers and/or electrostatic precipitator filters to remove entrained solid particulate and condensed tars, which are recycled back into the gasifier. The treated syngas is then combusted in a conventional IC engine generator set to produce electricity.

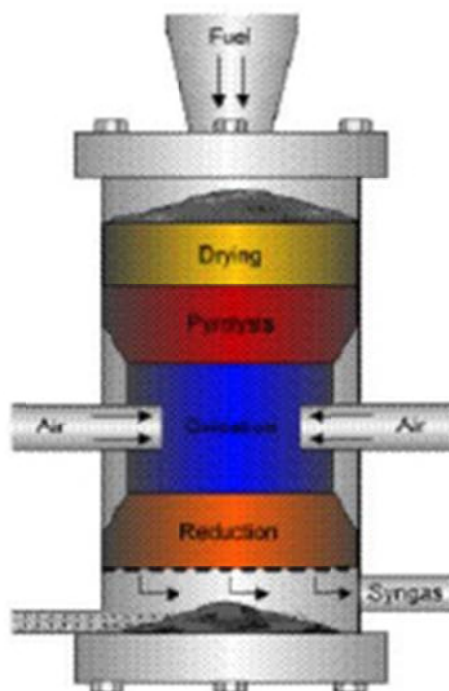
### 4.2 Variation in Technologies

Updraft, downdraft, and cross draft gasifiers are the most common type of gasifier configurations. Each configuration is characterized by the airflow through the gasification unit. The principle geometry of each gasifier is similar. The gasification schematic below is a downdraft gasifier defined by the direction of airflow moving down through the gasifier first passing the loaded fuel, then the combustion zone, and finally through the reduction zone (biochar). Downdraft gasification is the most common gasification configuration due to a tendency for cleaner producer gas since the gas is filtered through the biochar in the reduction zone before collection.

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<sup>3</sup> Electrical Power Systems, Inc., Fresno, CA. Contact: Gary Olson, P.E. Electrical Engineering, [gary@epsfresno.com](mailto:gary@epsfresno.com), (559) 221-7230

Figure 1 – Gasifier Schematic



Updraft gasification is comparable to the schematic, but with opposite direction of airflow. Updraft gasifiers tend to have high-energy value gas; however, often with more tar contaminants (must be removed for use in an internal combustion engine). Thus far, updraft gasification has been used predominantly in larger distributed generation applications (3 MW or larger) to achieve economies of scale for gas cleanup.

Cross-draft gasifiers have air flow that cross the gasifier (perpendicular to the flow of wood). Cross-draft gasifiers can achieve relatively high temperatures; however, gas flow may vary throughout the gasifier yielding inconsistent tar cracking, and, like the updraft gasifier, significant cleanup may be necessary.

Fluidized bed gasifiers follow updraft or downdraft configurations but have a solid additive (e.g., engineered sand) that provides for more consistent heating across the gasification vessel. Fluidized bed gasification is typically used for large reactors to more efficiently maintain consistent heat throughout the reaction vessel. Small gasification systems typically utilize relatively small gasifiers, where due to their size, uniform heat distribution is not as challenging; therefore, fluidized bed gasifiers are typically used in larger-scale applications.

In addition to these principal gasifier configurations, many hybrid variations exist. For any technology considered for the WPWMA woody biomass project, operational data should be reviewed and evaluated as part of the selection criteria.

#### 4.3 European and North American Experience

Although historic woody biomass gasification is generally remembered as occurring during the Second World War to create a substitute fuel for vehicles, as petroleum fuels were either heavily rationed or unavailable, the modern era of biomass gasification began in the 1970's.

Canada, Finland, Sweden, and the United States were initially involved in the development of biomass gasification. In the 1970s, especially, the United States fulfilled a leading role in response to the disruption of oil supply and high oil prices. The potential to substitute natural gas or transportation fuels was viewed as being very important. However, the energy crisis of the 70's softened, and the 1980s saw government funded and/or incentivized biomass gasification significantly decreased and projects terminated.

The 1990's brought increased awareness of climate change, which resulted in a renewed interest in biomass gasification. While some minor developments in the United States continued, European countries became increasingly involved. Germany and Austria have joined Sweden and Finland as leading countries, and several others have become involved in development and implementation, including the Netherlands, Italy, Britain, Switzerland, and Denmark. These countries have strong support for renewable biomass, and the development of biomass gasification has become an established practice. In further response to developing biomass energy and reducing the carbon footprint, many of the European countries established relatively high electricity tariffs for bioenergy projects, going to over \$0.30 a kilowatt hour in the late 2000's. This greatly incentivized biomass gasification to electricity systems in Europe.

While wholesale electricity prices in the United States remain relatively low and not particularly conducive to biomass gasification to electricity projects, state's Renewable Portfolio Standards, and other legislative initiatives, have incentivized some biomass gasification projects as a few of those states have pricing structures to encourage bioenergy in general. Nowhere is that more prominent than in California, where its RPA is targeting 50% renewable energy by 2050. Bioenergy development has been further encouraged financially by SB 1122, which created the BioMAT program and appears to be drawing biomass gasification to electricity vendors and developers to California. These vendors are from the United States, Europe, and Asia (principally India and China, who are also developing a robust biomass gasification industry).

There are numerous small to larger scale biomass gasification to electricity systems throughout Europe. The small gasification systems range from modular units rated at 30 to 45 kW, progressing upwards to 5 and 6 MW.

In North America, the number of gasification technology vendors with existing facilities or contemplating facilities is much less. The table below lists several technology vendors that are known by TSS to be active in the United States. Several in the table are interested in establishing CA facilities under the BioMAT program. With the exception of two companies, their gasifiers are manufactured in the United States.



Table 3

Gasifier Technology with Existing or Planned Experience in the U.S.	
Company Information	Unit Sizes
Biogen* <a href="http://www.biogendr.com">www.biogendr.com</a>	0.5–1.5 MW
Cortus Energy* <a href="http://www.cortusenergy.com">www.cortusenergy.com</a>	2.0–6.0 MW
Emery Energy Company <a href="http://www.emeryenergy.com">www.emeryenergy.com</a>	1.0–12 MW
PHG Energy <a href="http://www.phgenergy.com">www.phgenergy.com</a>	1.0–2.0 MW
Phoenix Energy <a href="http://www.phoenixenergy.net">www.phoenixenergy.net</a>	0.5–1.5 MW
Sierra Energy <a href="http://www.sierraenergycorp.com">www.sierraenergycorp.com</a>	0.5 – 1.0 MW
Tucker RNG <a href="http://www.rngnow.com">www.rngnow.com</a>	0.5–1.5 MW
West Biofuels <a href="http://www.westbiofuels.com">www.westbiofuels.com</a>	0.25–1.0 MW
Zero Point Clean Tech <a href="http://www.zeropointcleantech.com">www.zeropointcleantech.com</a>	0.5–2.0 MW

The BioMAT program has encouraged many new gasification to electricity projects to be proposed in California. Known proposed projects include:

- North Fork, Madera County – 2 MW
- Wilseyville, Calaveras County – 3 MW
- Grass Valley, Nevada County – 3 MW
- Mariposa County – 1 to 3 MW
- Tuolumne County – 3 MW
- Hat Creek Construction Company, Shasta County – 3 MW
- West Biofuels, Yolo County – 0.5 MW

There are several others known in the urban and agriculture wood waste sector that are either planned or even gone through the land use entitlement process. Some of those projects will be distributed generation projects where the power will be used on site to offset the cost of retail electricity, while others may enter the BioMAT program.

#### 4.4 Feedstock Considerations

Principal characteristics of woody biomass to be considered for use in a gasifier are material size, dimension and moisture content. The way the wood feedstock is processed also is a consideration.

Moisture content of woody biomass feedstock is very important to all gasification systems. Feedstock moisture content above 30% will result in a lower gasification thermal efficiency, as energy is needed to evaporate the water; the resulting steam also affects gas composition. Higher moisture contents also reduce the temperatures that are achieved, increasing the proportion of syngas tars in the syngas due to incomplete cracking. However, drying feedstocks to less than 10% requires ever increasing energy inputs; hence, moisture



contents in the 10-20% range are preferable. Urban sourced woody biomass can have a large range of moisture, as it can be composed of old dry lumber and freshly cut landscaping waste. Some drying, principally via storage time, can bring the moisture content into the appropriate range.

Size and dimension of the woody feedstock to the gasifier is important. Generally, sizes between ¼ inch to 3-inch are preferable. Longer materials may cause bridging and jamming in the gasifier and gasifier feed system. Fines - those particles less than ¼-inch minus - are ideally kept at 5% or less of intake volume. These sizes can be met with final processing screens prior to delivery to the gasifier.

Recently the U.S. Environmental Protection Agency (EPA) promulgated regulations which impact certain woody biomass materials, such as resinated wood (plywood, pressboard, etc), that can be used in a biomass system. However, these regulations only apply to biomass direct combustion or solid waste incineration units. Gasification systems do not fall into either of these types of biomass utilization systems; thus the regulations do not apply to biomass gasification. However, air quality management districts do have the ability to restrict contaminated biomass from any type of biomass utilization system, so early interface with the Placer County APCD is important. Testing of such biomass materials can be conducted during the permitting process to demonstrate the ability of biomass gasification systems to meet their stringent air quality requirements.

#### **4.5 Matching Gasification Equipment to Generation Equipment**

A number of the components of syngas cause challenges which must be addressed at the outset, including tars, hydrogen levels and moisture. Hydrogen gas is much quicker to burn than methane, which is the normal energy source for gas engines. Under normal circumstances, faster combustion in the engine cylinders would lead to the potential of pre-ignition, knocking and engine backfiring. In order to counter this challenge, engine manufacturers have modified engines so the output of the engine is reduced to between 50-70% of its typical natural gas output (i.e. a 1,063kW engine running on natural gas is comparable to a maximum 730kW engine on synthetic gas).

Currently there are two IC engines manufactured to run on woody biomass-produced syngas that could be potentially used for the WPWMA gasification project. Dresser-Rand Guascor SFGLD Series engines were specifically developed to work on lean gases from biomass gasification processes. They have an engine rated at 750 kW using syngas. Thus, for a 3 MW facility, 4 engines would be necessary. Dresser-Rand does warranty this 750 kW engine when using woody biomass syngas.

GE Jenbacher makes a 1 MW engine burning syngas from biomass gasification. Their model J612 is to be used in several currently planned small scale projects, such as the 2 MW facility in North Fork, CA. GE Jenbacher backs up this unit with performance warranties.

For IC engine designs that involve “rich” burn engines, catalytic convertor controls are used to control nitrogen oxides (NOX), reactive organic gases (ROG), and CO; for “lean burn” engines, selective catalytic reduction (SCR) controls are used for NOX control. Both the Guascor and Jenbacher are lean burn, which allows for the aggressive SCR system for NOx control, which will be necessary to keep the WPWMA biomass gasification system emissions low enough so emission offset credits are not necessary (see permitting discussion below).

## 4.6 Operations and Maintenance

Operation of the biomass gasification to electricity system does not necessarily require specialized personnel. Gasification system providers can train personnel to run the system. However, for routine maintenance and replacement, personnel skilled in engine maintenance would be required as care and maintenance of the IC engine is paramount.

There is some variation in O&M between technologies depending on the type of gasifier vessel, IC engine brand, and syngas cleanup system. In selecting a technology, it is recommended that the IC engine be warranted for biomass syngas use, and the syngas cleanup system use a low to very low volume of water for cleanup, so as to avoid the generation of contaminated water that may require off-site disposal.

## 4.7 Rehabilitation and Replacement

Rehabilitation and replacement can include major IC engine genset repairs (non-routine), IC engine replacement, gasifier vessel refractory replacement, and even complete gasifier replacement. Standard biomass industry estimates place these costs at \$0.01 to \$0.02 per kWh.

Major rehabilitation activities, such as IC engine overhaul and gasifier vessel refractory replacement, are generally projected to occur every five years.

## 4.8 Operating Efficiency

At the 3 MW level, gasification technology with gas conditioning is typically the most efficient conversion technology due to the relatively high efficiency of the internal combustion engine compared to comparably sized steam turbines and ORC engines. The biogas can be used in combustion engines (10 kW to 10 MW) with efficiency of 30%-35%

## 4.9 Biochar Production

Biochar is generated as part of the gasification process in a relatively low temperature, low oxygen environment, and is predominantly comprised of fixed carbon. Ash is generated as part of the direct combustion process in a relatively high temperature, high oxygen environment. Relatively low temperatures and low oxygen environments in biomass gasification technologies minimize the impacts of alkali metal oxides; however, the gasification environment will yield products of incomplete combustion including polycyclic hydrocarbons and aldehydes, which reduce the quality of biochar for agricultural and filtering applications. Air and gas flow through the gasification vessel determine the characteristics of biochar.

For a small biomass gasification to electricity project, solid residual production quantities are relatively low – approximately 8 percent to 15 percent of dry feedstock input (weight basis) for biochar, or 5 to 10 percent of dry feedstock input for ash. For a 3 MW project, biochar yields are expected to be between 1,920 and 3,600 tons per year (TPY).

Primary markets for both biochar and ash include soil amendment, concrete additive, and filtration agent (such as the initial stages of wastewater filtering). Market prices for biochar are heavily dependent on the chemical characterization of the material. With a relatively

immature market, prices vary by producers; however, prices currently are reported from \$100 to as high as \$1,600 per ton wholesale, and \$0.50 to \$2.00 per pound retail.

#### 4.10 Interconnection

As discussed in Section 3.4, a Rule 21 Pre-application Report for this project was requested from PG&E. That report indicates that there are no known constraints for interconnecting the proposed 3 MW woody biomass facility to the distribution system; however, it also indicates that a System Impact Study will be required to determine what distribution system upgrades will be necessary.

#### 4.11 Permitting

A 3 MW woody biomass gasification to electricity system at WPWMA will require an Authority to Construct from the Placer County Air Pollution Control District. The principal emissions control devices requiring permitting will be a Selective Catalytic Reduction (SCR) device for the IC engine gensets (used for electricity production) and the standby flare needed when the syngas is not used in the IC engines. Below are tables displaying the calculated emissions.

Table 4

<b>Emissions from IC Engines (Approximate Depending on Technology)</b>		
<b>Pollutant</b>	<b>Emission Factor (lb/hr)</b>	<b>Total Emissions (TPY)</b>
NOx	0.38	4.98
VOC	0.364	4.77
PM10	0.1	1.32
CO	2.56	33.63
SOx	0.03	0.39

The emissions for the IC engines component of the gasification system are based on a Potential to Emit of 8,760 hours (1 year at 24/7). In reality, the annual capacity of the gasification to electricity system will be in the 85% range, so actual emissions will be less.

Table 5

<b>Emissions from Standby Flare (Based on 250 Hours per Year)</b>		
<b>Pollutant</b>	<b>Emission Factor (lb/hr)</b>	<b>Total Emissions (TPY)</b>
NOx	0.80	0.3
VOC	0.74	0.28
PM10	0.1	0.04
CO	4.37	1.64
SOx	N/A	0

Compared to the necessary maximum operating time for the IC engine gensets to create electricity, hours of operation time of the emergency standby flare can be greatly reduced,

because if there are issues with the gasifiers or engines, the gasifiers can be readily turned off and the emergency standby flare is not needed<sup>4</sup>.

In examining the air quality permitting process with the Placer County Air Pollution Control District, and their New Source Review Rule 502, the table below tallies the estimated emissions from the engines and flare, and compares them to the Best Available Control Technology thresholds and the Emissions Reduction Credits thresholds.

**Table 6**

<b>Total Emissions and BACT and ERC Needs</b>					
<b>Pollutant</b>	<b>Engines w/SCR Total Emissions (TPY)</b>	<b>Flare Total Emissions (TPY)</b>	<b>Total Estimated Emissions (TPY)</b>	<b>PCAPCD BACT Threshold (TPY)</b>	<b>PCAPCD ERC Threshold (TPY)</b>
NOx	4.98	0.3	5.01	10	10
VOC	4.77	0.28	5.05	10	10
PM10	1.32	0.04	1.36	80	15
CO	33.63	1.64	35.37	550	99
SOx	0.39	0	0.39	80	27.5

Although it can be seen that the engines and the flare do not exceed the BACT thresholds for any of the pollutants, the Selective Catalytic Reduction (a BACT) is already proposed for the WPWMA so as to not require Emission Reduction Credits, as such credits are difficult and expensive to obtain.

In further regards to the need for ERC's, the PCAPCD has indicated to WPWMA that although the facility already exceeds the ERC thresholds per its Title V air permit, given that the proposed gasification facility uses a totally different fuel (woody biomass v. landfill gas), the current level of pollutant emissions is not additive regarding exceeding the threshold. Thus, the PCAPCD stated that ERCs would not be needed by the proposed gasification project as the woody biomass system constitutes a new energy system using different fuel for activities subject to air permitting activities.<sup>5</sup>

Currently the WPWMA landfill and materials recovery facilities and activities are approved under the December 1993 Conditional Use Permit (CUP 17-17), which was also amended in June 2003. However, the CUP approved items do not include a woody biomass gasification to electricity facility. The CUP would have to be amended to include such a facility. It is important to note that the estimated emissions for VOCs, NOx, and PM10 do not exceed the PCAPCD recommended project-level Thresholds of Significance for environmental impact<sup>6</sup>. This level is set at 82 pounds per day of each of the three pollutants, which would be nearly 15 tons on an annual basis. Project estimated emissions of NOx and VOCs are only about a third of this, and PM10 is not even 10%. This should allow for a relatively easy CEQA review, with a Mitigated Negative Declaration most likely.

<sup>4</sup> It may be technically feasible to utilize the landfill gas flare for this purpose to avoid the cost of a separate flare for the gasification unit; however, this may require a permit modification for the LFG flare. Costs and benefits should be reviewed during project design.

<sup>5</sup> Meeting with John Finnell, Permitting Manager, Bruce Springsteen, Compliance Manager, and Eric White, Air Pollution Control Officer, June 10, 2016. Will Dickinson, CPGF, and Fred Tornatore, TSS Consultants in attendance.

<sup>6</sup> Chapter Two of the PCAPCD CEQA Air Quality Handbook, October 2012

#### 4.12 Vendor Interest and Capability

Based on initial discussions, two separate vendors (and potential developers) of small-scale woody biomass gasification to electricity systems have professed interest in participating in a 3 MW project at the WPWMA site. Both companies visited the site in May 2015. Other vendors may also have an interest in providing their technology.

##### West Biofuels

West Biofuels (WB) is located in Woodland, CA. They have been conducting research, development, and deployment activities with their Inser "Circle Draft" woody biomass gasifier. WB is currently testing the gasifier and gas cleanup system, and has recently installed an IC engine genset to test the overall gasification to electricity system. Their on-site 0.5 MW system has been accepted into PG&E Category 1 BioMAT program, but WB has yet to accept the current feed-in tariff.

The WB "Circle Draft" technology is currently operating in Italy and appears to have a track record of success. The technology is robust and gives extreme consideration to syngas cleanup and producing highly marketable biochar. Below is a schematic and photo (Figures 2 and 3) of the 0.5 MW gasifier in Woodland.

Figure 2 – West Biofuels – Inser "Circle Draft" Gasifier

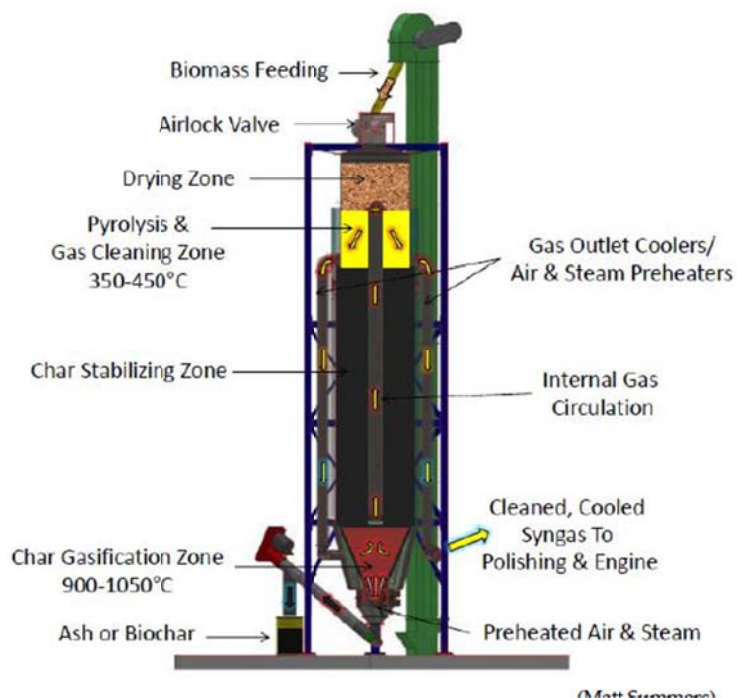
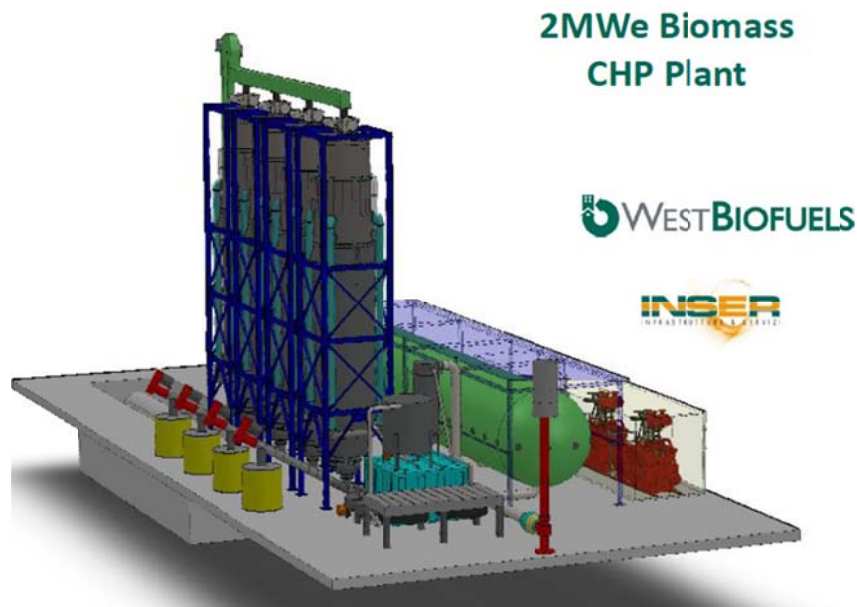


Figure 3 – Photo of WB Gasifier Unit



Although the “Circle Draft” gasifier is of Italian origin, the 0.5 MW unit at West Biofuels was fabricated in the Woodland area and assembled on site, and West Biofuels plans to continue this arrangement as it ramps up to commercial deployment of the system. Their plans are to use the 0.5 MW unit size for small-scale power plant projects (3 MW or less to conform with BioMAT requirements). Thus, a 3MW system would employ 6 gasifiers and likely 3 or 4 IC engine gensets. Although only a 2 MW layout, the following Figure 4 illustrates what a WB biomass gasification facility could look like.

Figure 4 – 2 MW Facility Layout



As WB has an operating biomass gasification system at their facility in Woodland, and will continue to use it as a testing system, biomass feedstock from WPWMA could be readily tested and project operating parameters could be determined before further consideration of this technology by WPWMA.

### Phoenix Energy

Phoenix Energy (PE) reportedly has developed several woody biomass gasification projects in Eastern Europe and has more recently installed two woody biomass gasification systems in California. These are a 0.5 MW facility in Merced (see Figure 5), and a 1 MW facility in Oakdale. The gasifier units are of the down-draft configuration and are manufactured by Ankur Scientific (India).



Figure 5 – PE Merced 0.5 MW Facility



It has been reported that both facilities have had operational difficulties, primarily with their gas cleanup system, which produces a fairly large amount of wastewater needing treatment and/or disposal<sup>7</sup>. Both facilities are attempting to rectify the situation. The Merced facility is currently undergoing modifications to its gas clean up system to minimize wastewater production.

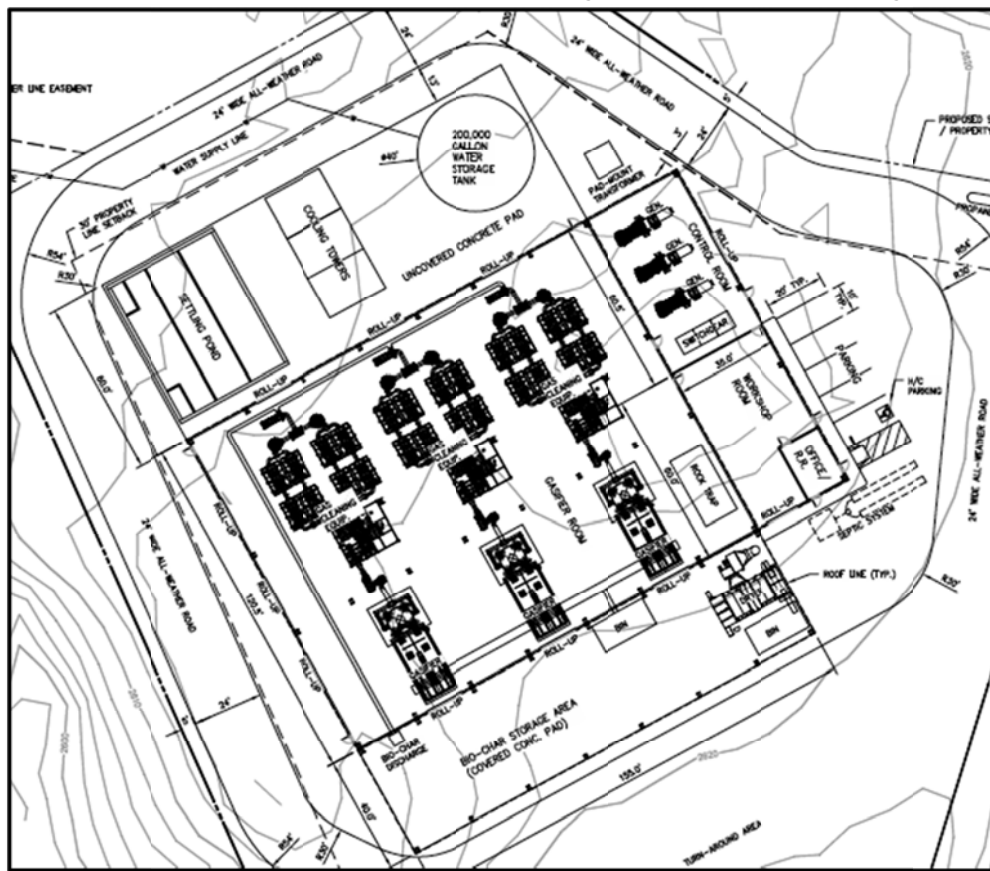
Phoenix Energy is currently involved in development and pre-development activities on several other woody biomass gasification systems in California. In 2015, PE, in conjunction with the Watershed Training and Research Center (Hayfork, CA), and the North Fork Community Development Council, secured a \$5 MM grant from the CA Energy Commission to install a forest-sourced woody biomass gasification in North Fork. This project is moving forward with PE using a different gasification and gas cleanup system than Merced or Oakdale. Other PE projects include the planned 2 MW facility at Cabin Creek in Placer County, and the 3 MW Wilseyville facility in Calaveras County (see Figure 6 below). PE is currently conducting the interconnection study work for proposed biomass to electricity facilities in Nevada and Yuba Counties. PE is also involved in other BioMAT projects in Category 1 at various solid waste transfer and processing facilities.

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<sup>7</sup> Biomass Gasification, January 2015, a draft report prepared by the California Biomass Collaborative



Figure 6 – Planned 3 MW Facility in Calaveras County



### Other Potential Vendors

As previously mentioned, the BioMAT program is creating interest in the CA biomass gasification sector by other vendors and potential developers. Table 3, above, lists those vendors who might be contacted, and/or solicited through the WPWMA bidding process for development of the woody biomass gasification facility at the WPWMA site.

## 5.0 Project Delivery

Employing gasification at WPWMA could be accomplished via a number of different methods, ranging from private development and ownership on WPWMA property to WPWMA ownership and operation by WPWMA staff. In keeping with past practice, Capitol PFG has assumed that WPWMA would procure and own the equipment, locate it on WPWMA property and utilize a private firm to operate and maintain the equipment.

To complete the capital improvements, a Design/Build agreement with a gasification developer could be considered, with the developer taking on the following responsibilities:

1. Provide WPWMA with a fixed cost to complete steps 2 -5 below.

2. Assist an electrical engineer hired by WPWMA with completing a System Impact Study of PG&E capacity based on equipment the developer plans to utilize. Depending on the outcome of this study (primarily the cost and complexity of improving PG&E's system), WPWMA may wish to modify or drop the project, as these costs will be WPWMA's responsibility. If the project is a go from that point, then Step 3.
3. Assist WPWMA in submitting a bid to the BioMAT program. If WPWMA is successful, and enters into a Power Purchase Agreement, proceed with Step 4.
4. Design, specify, install and performance test the following equipment to meet performance standards established by WPWMA: feedstock conveyance, gasification, syngas cleanup, electrical generation and transmission equipment, plus monitoring systems.
5. Warranty the performance of the system they have designed, not just individual pieces of equipment. One vendor has proposed doing so only if they can remotely monitor the equipment for compliance with operating specifications.
6. Potentially, assist with periodic major overhauls of equipment.

Although operation and maintenance of the gasification system was originally considered for inclusion in the Energy Management Firm RFP<sup>8</sup>, Capitol PFG recommends first attempting to negotiate a favorable deal with the MRF operator (Nortech Waste LLC), because Nortech has:

1. Personnel onsite 24/7
2. Control of the site and the woody biomass feedstock
3. Existing chipping and grinding operations
4. Experience operating and maintaining complex equipment
5. A long-term interest and commitment to site operations

If it is not possible to negotiate a favorable deal with Nortech, the project could likely move forward utilizing a different project delivery method; however, if this occurs it is recommended that the financial feasibility be re-examined.

## 6.0 Financial Feasibility

### 6.1 Model Description and Assumptions

To investigate the financial feasibility of proceeding with gasification of woody biomass, Capitol PFG developed the financial model shown in Exhibit A. The model projects costs and revenues for the WPWMA and the private firm that would operate the gasification unit and generator set. Some of the more important assumptions for this model include:

1. WPWMA will invest in new equipment and other improvements needed to gasify the woody biomass and produce electricity for outside sale. CAPEX (including interconnection) is estimated at \$13.4 million, with no grant funding<sup>9</sup>.

<sup>8</sup> An RFP under development to obtain proposals for use of the landfill gas generated at the WPWMA landfill.

<sup>9</sup> Grants from the California Energy Commission or CalRecycle are potentially available; however, they are competitive, dependent on timing and can add to project costs, so were not included in the assumptions.

2. Nortech will continue to accept and process Construction and Demolition (C&D) waste, source separated wood waste and wood mixed with other residential and commercial wastes. The supply of this material will increase over time. In addition, Nortech will continue to produce Compost Overs from green waste processing, and a large portion of this material will be appropriate for gasification<sup>10</sup>.
3. Nortech will use the suitable woody material from these sources as feedstock for a gasification unit that will produce a syngas to power generators that produce electricity. Nortech will operate and maintain the gasification and generating equipment.
4. WPWMA will enter into a Power Purchase Agreement with PG&E through the BioMAT program. The assumed tariff is \$127.72 per MWh, which is the starting point for the adjustable tariff<sup>11</sup>.
5. In lieu of paying a fee for service, WPWMA will pay Nortech 30% of gross revenue from power sales. This will provide both parties with an incentive to produce as much electricity as possible.
6. Nortech will market biochar from this process and pay WPWMA 50% of gross revenue from biochar sales.
7. The value of the feedstock is assumed to be zero dollars (\$0.00)<sup>12</sup>.
8. All equipment and improvements will be functional (and amortized) over a fifteen-year period, which is the assumed Planning Period for this project<sup>13</sup>.
9. The Power Purchase Agreement will coincide with the Planning Period and terminate after fifteen years.
10. Feedstock consumption rates are assumed to average 2.2 dry pounds per KWh, resulting in a need for 24,500 bone dry tons per year of feedstock, which is equivalent to 32,000 tons per year at 30% moisture content.
11. WPWMA will pay for major equipment overhauls that are expected every five years. A reserve fund contribution of approximately \$200,000 per year will be allocated for this purpose.
12. Electrical output has been calculated with a 9% parasitic loss and 85% full capacity runtime.
13. One hundred percent of capital costs will be financed at 5% interest over fifteen years.
14. Inflation will average 2% per year.

## 6.2 Model Results

<sup>10</sup> Finely ground material below ¼" in size is not suitable for gasification. The moisture content of the compost overs is also a concern. It will likely be possible to gasify some portion of the compost overs if mixed carefully with the drier materials; however, this has not been tested yet. Another possibility might be to dry the overs using waste heat from the gasifier, the landfill gas to electricity gensets, or solar energy, provided this could be done economically.

<sup>11</sup> The tariff adjusts based on interest in the program and future bidding. Once the PPA is signed, further adjustments do not impact the parties to the PPA.

<sup>12</sup> When markets for biomass were good, Nortech could achieve a small net profit by hauling chips to Rio Bravo. When markets are bad, as they are now and as expected in the future, the cost of transportation can easily exceed the revenue received – resulting in a negative value per ton. A zero value was chosen to be conservative.

<sup>13</sup> Although the equipment may last longer than 15 years, price inflation decreases the value of the fixed tariff rate over time. Also, maintenance costs on older equipment and technological obsolescence make a 15-year Planning Period more appropriate than the typical 20-year period.

Using the assumptions utilized in the development of this model, the total of WPWMA excess revenue (\$3,919,882) plus Nortech profit from the gasification process (\$3,287,176) averages \$480,000 per year, for a total of \$7.2 million over fifteen years. How this excess is actually split between WPWMA and Nortech is a matter for future negotiation. This negotiation should focus on investment obligation (significant for WPWMA) and risk factors, which can generally be allocated as follows<sup>14</sup>:

**Table 7**

<b>Risk Factor</b>	<b>WPWMA</b>	<b>Nortech</b>
Technology/equipment failure	primary	secondary
Permitting	primary	secondary
PG&E approvals	primary	secondary
BioMAT acceptance	primary	secondary
Shortfalls in acceptable feedstock	both	both
Inflation exceeding projections	secondary	primary
Operation & Maintenance cost increases		primary
Project delays	both	both
Regulatory changes	both	both
Biochar value	both	both
Financing costs	primary	
Capital cost	primary	
Safety	both	both
Environmental impacts	primary	secondary

Although the project appears to provide only a “moderate” or “fair” return on investment<sup>15</sup> under the modelled scenario, it has the additional benefit of helping to solve a potentially serious problem with marketing woody biomass. A calculation of this benefit is not included in the model due to the current lack of knowledge regarding options for marketing various components of the woody biomass<sup>16</sup>.

It is worth restating that there isn’t a good historical record for gasification projects in California, nor for the BioMAT program. Before moving forward with the project, both parties should review their ability to manage risk and attempt to mitigate where possible.

### 6.3 Sensitivity of Assumptions

Because the financial analysis depends on many assumptions, it is important to understand how the outcomes change with different assumptions or conditions. Testing several of the key assumptions led to the following results.

1. **Capital Expense.** *Assumption:* The capital investment, not including costs associated with interconnection, will total \$12.9 million. *Impact:* A change of one million dollars in capital investment (up or down) results in a corresponding \$1.44

<sup>14</sup> Assumes that Nortech will retain responsibility for marketing wood regardless of gasification success or failure.

<sup>15</sup> 29% over 15 years, or 2.0% per year to WPWMA as modeled.

<sup>16</sup> It is possible to estimate this value through the model by inserting a negative value for the feedstock equal to the expected cost to Nortech for either recycling the material through some other means or paying a disposal cost. For example, a negative \$5 per ton value for feedstock equates to an additional \$3.1 million in benefit over the Planning Period.

million change to WPWMA net revenue over the Planning Period. There is no impact to Nortech. *Conclusion:* WPWMA net revenue is very sensitive (positive and negative) to changes in capital investment.

2. **Interconnection costs.** *Assumption:* the total cost to study impacts to PG&E, improve their distribution system and install equipment on WPWMA property to allow connection will total \$500,000. *Impact:* If interconnection costs are twice as much as estimated (i.e. \$1,000,000 instead of \$500,000), WPWMA net revenue over the Planning Period would fall by \$722,000. There would be no impact to Nortech. *Conclusion:* WPWMA net revenue is sensitive to changes in the cost of interconnection, and it is more likely that this cost will exceed rather than fall below the estimate.
3. **Operating Expense.** *Assumption:* Nortech will incur major expenses for operating and maintaining the equipment and managing feedstock. WPWMA will have relatively small operating expenses relative to Nortech's. *Impact:* Operating expenses directly impact either parties' bottom line, so a \$100,000 savings or increase in expenses affects profitability by \$100,000. *Conclusion:* Nortech profits are very sensitive (positive and negative) to their ability to control operating costs.
4. **Inflation Assumption.** *Assumption:* Price inflation over the Planning Period will average 2%. *Impact:* A 1% increase in the average inflation rate results in a \$670,644 decrease in Nortech's profits and a \$171,732 decrease in WPWMA's net revenue over fifteen years. Inflation below 2% would have the opposite effect. *Conclusion:* The model is moderately sensitive (positive and negative) to inflation assumptions.
5. **Approved tariff for electricity sales.** *Assumption:* the PPA will specify a tariff of \$127.72 per MWh. *Impact:* for every 2% change in the tariff price, total revenues shared by the two parties over the Planning Period change by \$770,000. *Conclusion:* Changes are not expected to exceed plus or minus 2% of the starting tariff, so this is considered a relatively insensitive assumption.
6. **Biochar value.** *Assumption:* the sales price for biochar will average \$60/ton over the Planning Period. *Impact:* for every \$30 change in the price of biochar, total revenues shared by the two parties over the Planning Period change by \$1.15 million. *Conclusion:* Model results are very sensitive to the value of biochar, and there is more potential for higher revenues than lower due to the conservative assumption used<sup>17</sup>.
7. **Operating reliability of gasification and generating equipment.** *Assumption:* Gasification equipment will produce electricity at 85% of the available operating capacity. Maintenance and rehabilitation costs are based on industry standards. *Impact:* A 1% change in average operating reliability results in a \$440,000 change in revenue shared by the parties over the Planning Period. Maintenance and rehab costs might also be impacted if reliability is better or worse than assumed. *Conclusion:* Model results are very sensitive (positive and negative) to the assumptions relating to operating reliability.

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<sup>17</sup> Biochar value is not expected to drop below the value of compost as it can be used as a compost additive.

8. **Feedstock value.** *Assumption:* The value of the feedstock for other uses is zero. *Impact:* If the MRF operator has an outlet for wood chips that nets them \$10 per ton rather than \$0 per ton, the model shows no net revenue or profit remaining for WPWMA or the MRF operator. *Conclusion:* Model results are very sensitive to the assumptions relating to feedstock value.
9. **Feedstock availability.** *Assumption:* 24,572 dry tons per year of suitable feedstock (32,000 tons at 30% moisture) will be available for gasification<sup>18</sup>. *Impact:* If available dry tons drop below the assumption by 10%, shared revenue over the Planning Period could drop by \$1.2 million. An increase in tonnage will not improve revenues unless there is also an increase in operating reliability. *Conclusion:* A large reduction in revenue is possible if suitable feedstock is not available, so model results are sensitive to this factor. A large increase in the amount of wood waste accepted by WPWMA is anticipated over the Planning Period due to regional housing growth and the closure of large biomass plants using urban wood waste. On the other hand, the amount of wood currently accepted that might not meet air district standards for gasification is not known. Reductions in feedstock that is considered "suitable" due to air regulations could potentially have a significant impact on feedstock supply, so should be investigated further during the design stage. If supply appears uncertain, WPWMA may wish to reduce the design capacity of the gasification system to reduce capital cost.
10. **Financing cost.** *Assumption:* One hundred percent of capital costs will be financed at 5% interest over fifteen years. *Impact:* a change of 1% in the interest rate charged for financing all capital costs results in a change of \$1.3 million in WPWMA net revenue over the Planning Period (there is no impact to Nortech). *Conclusion:* Model results for WPWMA are sensitive to changes in interest rates; however, if interest rates increase dramatically WPWMA could consider using reserves to fund all or a portion of the project.

## 6.4 Limitations of Financial Analysis

This analysis is meant solely for the purpose of projecting the feasibility of the WPWMA proceeding with gasification of woody biomass to produce electricity for sale through the BioMAT program. Although the assumptions used are reasonable based on current understanding, it is acknowledged that project feasibility could change significantly if certain assumptions prove incorrect. WPWMA should continually re-evaluate this project as it moves forward to ensure that projected costs and revenues fall within required parameters.

## 7.0 Recommendation

There are two primary paths that WPWMA could pursue at this time with regard to gasification:

1. **Do nothing.** This would be the appropriate choice if WPWMA is confident that there will be alternative long-term markets for wood chips or other wood products with a net value of at least \$5.00 per ton.

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<sup>18</sup> This equates to the amount of fuel necessary to run a 2.7 MW output facility at 85% capacity.



## 2. Begin implementation of a gasification project.

Placing a value on the next best option for the reuse or recycling of woody biomass is of primary importance in determining which path to take. While markets for wood chips to mass-burn biomass plants such as Rio Bravo Rocklin appear to be in decline, other markets do exist. For example, Nortech is currently testing additional grinding and coloration of wood chips for outdoor landscaping uses, and has reported the potential to achieve revenue per ton from the sale of colored chips that far exceeds the \$18/ton rate from their previous sales to Rio Bravo - with relatively low capital and operating costs. Nortech assesses the market for colored chips as strong, and anticipates being able to utilize all of the wood currently accepted and sell it at a favorable profit margin. If this assessment is accurate, there appears to be no reason to pursue gasification; however, because Nortech's experience with colorized wood chips is very recent, caution is due in predicting their ability to profitably utilize all of the woody biomass in this fashion. It seems likely that other competitors may enter the landscaping chip market seeking outlets for the wood waste recently rejected by biomass facilities. This could result in a market glut, with much lower returns for colorized wood chips.

It is also possible that the State of California will at some point require PG&E to offer favorable PPAs to the existing biomass plants as a way to retain markets, jobs and investment value. If this occurs, the market price for wood chips may rebound back to historic levels.<sup>19</sup>

Considering Nortech's belief in the continuing viability of the landscaping chip market, Capitol PFG is reluctant to recommend proceeding with a gasification project. The capital cost is high, the path to a Power Purchase Agreement under BioMAT is difficult, and there are many risk factors outside of WPWMA's control. Unfortunately, though, if WPWMA does not proceed immediately with a gasification project, the opportunity may be lost due to oversubscription to BioMAT.

A possible middle course would be to start down the path to gasification, while re-evaluating the costs, benefits and risk at key points in the process. The advantage of this approach is that it keeps the gasification option open if wood chip markets weaken. The disadvantage is cost: each step requires a significant investment in application fees and staff and consulting time.

If the WPWMA Board determines that it is worth taking the initial steps toward a gasification project, we recommend proceeding to complete the following tasks in accordance with the Project Schedule, with "off-ramps" as noted:

- Determine the appropriate project delivery method
- Prepare capital project procurement documents, circulate and obtain bids
- Negotiate an amendment with Nortech to their MRF Operating Agreement

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<sup>19</sup> SB 859, now moving through the California Legislature, will require utilities to purchase 125 MW of power from existing biomass plants; however, the feedstock must be forest (not urban) wood and the contracts are only in place for 5 years.

- Revise the MRF PG&E account to show WPWMA as the customer rather than Nortech
- *If bids from gasification developers appear reasonable*, hire an Electrical Engineer and begin a System Impact Study
- *If SIS improvements are reasonable and within budget*, proceed with the Financing Plan and a BioMAT application
- Enter into a Power Purchase Agreement with PG&E if accepted into BioMAT
- Construct improvements
- Test equipment and begin producing power

## 8.0 Schedule

A schedule for project implementation is included as Exhibit B. This schedule is based on current knowledge, and will require periodic adjustments in accordance with changing circumstances.



## EXHIBIT A

**Gasification Feasibility - 15 year projections**

WPWMA	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Capital Budget</b>									
Permitting/professional services	\$ 150,000								
Site preparation / utilities	\$ -								
PG&E / CEC approvals	\$ 500,000								
Building improvements									
Equipment - installed	\$ 12,750,000								
Commissioning									
less grants									
net capital budget									
<b>total capital investment</b>	\$ 13,400,000								
<b>annual capital costs</b>	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987
<b>Annual Operating Costs</b>									
payment to EMF	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 847,344	\$ 847,344
WPWMA management/overhead	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000
equipment rehab / replacement	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042
inflation adjustment	\$ 4,921	\$ 4,921	\$ 9,842	\$ 14,763	\$ 19,683	\$ 24,604	\$ 29,525	\$ 34,446	\$ 39,367
<b>total Operating Cost</b>	\$ 1,016,355	\$ 1,021,275	\$ 1,026,196	\$ 1,031,117	\$ 1,036,038	\$ 1,040,959	\$ 1,045,880	\$ 1,127,832	\$ 1,132,752
<b>Annual Revenue</b>									
electricity sales	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708
biochar royalty	\$ 66,344	\$ 67,671	\$ 69,024	\$ 70,405	\$ 71,813	\$ 73,249	\$ 74,714	\$ 76,208	\$ 77,732
rent	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>total Revenue</b>	\$ 2,634,052	\$ 2,635,379	\$ 2,636,733	\$ 2,638,113	\$ 2,639,521	\$ 2,640,957	\$ 2,642,422	\$ 2,643,917	\$ 2,645,441
<b>annual net revenue</b>	\$ 326,711	\$ 323,117	\$ 319,550	\$ 316,009	\$ 312,497	\$ 309,012	\$ 305,556	\$ 225,098	\$ 221,702

# Gasification Feasibility - 15 year pr

WPWMA	2028	2029	2030	2031	2032	2033
<b>Capital Budget</b>						
Permitting/professional services						
Site preparation / utilities						
PG&E / CEC approvals						
Building improvements						
Equipment - installed						
Commissioning						
less grants						
net capital budget						
<b>total capital investment</b>						
<b>annual capital costs</b>	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987	\$1,290,987
<b>Annual Operating Costs</b>						
payment to EMF	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344
WPWMA management/overhead	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000
equipment rehab / replacement	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042	\$ 201,042
inflation adjustment	\$ 44,288	\$ 49,208	\$ 54,129	\$ 59,050	\$ 63,971	\$ 68,892
<b>total Operating Cost</b>	\$ 1,137,673	\$ 1,142,594	\$ 1,147,515	\$ 1,152,436	\$ 1,157,357	\$ 1,162,278
<b>Annual Revenue</b>						
electricity sales	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708	\$ 2,567,708
biochar royalty	\$ 79,287	\$ 80,873	\$ 82,490	\$ 84,140	\$ 85,823	\$ 87,539
rent	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>total Revenue</b>	\$ 2,646,995	\$ 2,648,581	\$ 2,650,199	\$ 2,651,848	\$ 2,653,531	\$ 2,655,248
<b>annual net revenue</b>	\$ 218,335	\$ 215,000	\$ 211,697	\$ 208,426	\$ 205,188	\$ 201,984

# Gasification Feasibility - 15 year projections

WPWMA	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Assumptions</b>									
Nominal Electrical Capacity - MW	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
output after parasitic loss - MW	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
capital cost per MW	\$4,250,000								
term on debt - years	15								
interest rate on debt	5.0%								
capacity factor	85%	85%	85%	85%	85%	85%	85%	85%	85%
MWh produced for sale	20,104	20,104	20,104	20,104	20,104	20,104	20,104	20,104	20,104
sale price per MWh electricity	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72
feedstock consumption - dry lb/KWh	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
feedstock consumption - dry ton/MWh	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
feedstock cost per wet ton	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
feedstock cost per dry ton (30% moist)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
feedstock required - dry tons/year	24,572	24,572	24,572	24,572	24,572	24,572	24,572	24,572	24,572
feedstock required - wet tons/year	31,943	31,943	31,943	31,943	31,943	31,943	31,943	31,943	31,943
biochar value - \$/ton	\$ 60	\$ 61	\$ 62	\$ 64	\$ 65	\$ 66	\$ 68	\$ 69	\$ 70
biochar produced - ton/year	2,211	2,211	2,211	2,211	2,211	2,211	2,211	2,211	2,211
EMF % of electricity revenue	30%	30%	30%	30%	30%	30%	30%	33%	33%
WPWMA % of biochar revenue	50%	50%	50%	50%	50%	50%	50%	50%	50%
rent capital surcharge	0.0%								
inflation rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

# Gasification Feasibility - 15 year pr

WPWMA	2028	2029	2030	2031	2032	2033
<b>Assumptions</b>						
Nominal Electrical Capacity - MW	3.0	3.0	3.0	3.0	3.0	3.0
output after parasitic loss - MW	2.7	2.7	2.7	2.7	2.7	2.7
capital cost per MW						
term on debt - years						
interest rate on debt						
capacity factor	85%	85%	85%	85%	85%	85%
MWh produced for sale	20,104	20,104	20,104	20,104	20,104	20,104
sale price per MWh electricity	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72	\$ 127.72
feedstock consumption - dry lb/KWh	2.2	2.2	2.2	2.2	2.2	2.2
feedstock consumption - dry ton/MWh	1.1	1.1	1.1	1.1	1.1	1.1
feedstock cost per wet ton	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
feedstock cost per dry ton (30% moist)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
feedstock required - dry tons/year	24,572	24,572	24,572	24,572	24,572	24,572
feedstock required - wet tons/year	31,943	31,943	31,943	31,943	31,943	31,943
biochar value - \$/ton	\$ 72	\$ 73	\$ 75	\$ 76	\$ 78	\$ 79
biochar produced - ton/year	2,211	2,211	2,211	2,211	2,211	2,211
EMF % of electricity revenue	33%	33%	33%	33%	33%	33%
WPWMA % of biochar revenue	50%	50%	50%	50%	50%	50%
rent capital surcharge						
inflation rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

**Gasification Feasibility - 15 year projections**

WPWMA	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Energy Management Firm</b>									
<b>Revenue</b>									
electricity royalty from WPWMA	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 770,313	\$ 847,344	\$ 847,344
biochar sales	\$ 132,688	\$ 135,341	\$ 138,048	\$ 140,809	\$ 143,625	\$ 146,498	\$ 149,428	\$ 152,416	\$ 155,465
total Revenue	\$ 903,000	\$ 905,654	\$ 908,361	\$ 911,122	\$ 913,938	\$ 916,810	\$ 919,740	\$ 999,760	\$ 1,002,809
<b>Expenses</b>									
electricity royalty	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
biochar royalty	\$ 66,344	\$ 67,671	\$ 69,024	\$ 70,405	\$ 71,813	\$ 73,249	\$ 74,714	\$ 76,208	\$ 77,732
rent	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
labor	\$ 183,404	\$ 187,072	\$ 190,814	\$ 194,630	\$ 198,522	\$ 202,493	\$ 206,543	\$ 210,674	\$ 214,887
other O&M	\$ 382,500	\$ 390,150	\$ 397,953	\$ 405,912	\$ 414,030	\$ 422,311	\$ 430,757	\$ 439,372	\$ 448,160
feedstock	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
general overhead	\$ 14,148	\$ 14,431	\$ 14,719	\$ 15,014	\$ 15,314	\$ 15,620	\$ 15,932	\$ 16,251	\$ 16,576
total expenses	\$ 646,395	\$ 659,323	\$ 672,510	\$ 685,960	\$ 699,679	\$ 713,673	\$ 727,946	\$ 742,505	\$ 757,355
<b>EBIT</b>	\$ 256,605	\$ 246,331	\$ 235,851	\$ 225,162	\$ 214,259	\$ 203,138	\$ 191,794	\$ 257,255	\$ 245,453
<b>EBIT as % of revenues</b>	28.42%	27.20%	25.96%	24.71%	23.44%	22.16%	20.85%	25.73%	24.48%

**Gasification Feasibility - 15 year pr**

WPWMA	2028	2029	2030	2031	2032	2033
<b>Energy Management Firm</b>						
<b>Revenue</b>						
electricity royalty from WPWMA	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344	\$ 847,344
biochar sales	\$ 158,574	\$ 161,746	\$ 164,981	\$ 168,280	\$ 171,646	\$ 175,079
total Revenue	\$ 1,005,918	\$ 1,009,089	\$ 1,012,324	\$ 1,015,624	\$ 1,018,989	\$ 1,022,422
<b>Expenses</b>						
electricity royalty	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
biochar royalty	\$ 79,287	\$ 80,873	\$ 82,490	\$ 84,140	\$ 85,823	\$ 87,539
rent	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
labor	\$ 219,185	\$ 223,568	\$ 228,040	\$ 232,601	\$ 237,253	\$ 241,998
other O&M	\$ 457,123	\$ 466,265	\$ 475,591	\$ 485,102	\$ 494,805	\$ 504,701
feedstock	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
general overhead	\$ 16,908	\$ 17,246	\$ 17,591	\$ 17,943	\$ 18,301	\$ 18,667
total expenses	\$ 772,502	\$ 787,952	\$ 803,712	\$ 819,786	\$ 836,181	\$ 852,905
<b>EBIT</b>	\$ 233,415	\$ 221,137	\$ 208,613	\$ 195,838	\$ 182,808	\$ 169,517
<b>EBIT as % of revenues</b>	23.20%	21.91%	20.61%	19.28%	17.94%	16.58%

## EXHIBIT B



## WPWMA Biomass Gasification Project Schedule

Milestone	start date	duration (days)	end date
Gasification feasibility report	4/1/2016	160	9/8/2016
SIS Pre-application	6/1/2016	30	7/1/2016
Negotiate deal points with Nortech	10/1/2016	100	1/9/2017
Develop Design/Build RFP	10/15/2016	60	12/14/2016
Circulate RFP	12/29/2016	30	1/28/2017
Pre-qualification of proposers	1/28/2017	30	2/27/2017
Phase II of RFP and selection of firm	2/28/2017	90	5/29/2017
Hire electrical engineer for SIS	3/30/2017	60	5/29/2017
System Impact Study	5/30/2017	300	3/26/2018
environmental review	1/25/2018	120	5/25/2018
financing plan	3/27/2018	60	5/26/2018
finalize agreement with Nortech	4/26/2018	45	6/10/2018
BioMat application	6/11/2018	30	7/11/2018
bid on BioMat power sale and sign PPA	8/10/2018	90	11/8/2018
Gasification developer permits, procures, installs and tests equipment	10/9/2018	300	8/5/2019
produce power per PPA	8/5/2019	30	9/4/2019

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January 31, 2017

Western Placer Waste Management Authority  
Mr. Ken Grehm, Executive Director  
11476 C Avenue  
Auburn, CA 95603

**RE: CHANGE IN CIRCUMSTANCES**

Dear Mr. Grehm:

Nortech Waste respectfully submitted a letter at the October 10, 2016 (attached), meeting of the Board of Directors as a late arriving correspondence, requesting an opportunity to discuss Changes in Circumstance, per article 4.04 of the Restated and Amended Operating Agreement ("the Agreement") between Western Placer Waste Management Authority ("WPWMA") and Nortech Waste, LLC ("Nortech"). On November 1, 2016, we met with you and your staff to discuss the contents of the letter and per our discussions we have continued to work with your staff to iron out the specifics. Since that first meeting, Nortech has had several meetings with WPWMA staff to outline the changes in applicable law and environmental law that has materially changed our method of operations. Nortech has presented information supporting the request for relief on these changes during each of the meetings. Below is a summary of information discussed at these meetings.

1. On January 8, 2010, the Office of Administrative Law (OAL) approved Part 2 of the California Air Resources Board ("CARB") Statewide Truck and Bus Regulation. Nortech has reviewed the costs incurred from maintaining compliance with this regulation with WPWMA staff and is requesting relief on the note that Nortech has with WPWMA, or reimbursement of \$802,713 for costs incurred through 2015. In addition to that amount, Nortech is requesting reimbursement of an additional \$320,000 that will keep the fleet compliant through 2019.
2. Legislative changes in California's Minimum Wage laws have mandated significant cost increases. Beginning in January 2007, increases in minimum wage were mandated and continue to increase through 2021. Nortech is requesting relief on the note Nortech has with WPWMA, or reimbursement of \$814,000 for costs incurred in 2014/2015, \$1,149,000 for cost incurred in 2015/2016, reimbursement of \$588,000 for costs incurred for the first six months (July 1, 2016-Dec 31, 2016) of 2016/2017 and an estimated additional \$588,000 for the second six months of 2016/2017. Nortech is also requesting, beginning FY2017/2018, an annual increase in our share of the processing fees in order to comply with Minimum Wage mandates.

**NORTECH LANDFILL, INC.**

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3. Nortech has also presented costs associated with processing Construction and Demolition debris and is requesting relief on the note that Nortech has with WPWMA, or reimbursement of \$332,000 for the first six months (July 1, 2016- December 31, 2016) of 2016/2017. Nortech is also requesting an increase in the C&D processing fee beginning January 1, 2017 to \$40.85 per ton, this new processing fee does not include the minimum wage effects described in bullet point number two.
4. In 2014, the California Environmental Protection Agency and the State Water Resources Control Board imposed new requirements for the General Permit for Storm Water Associated with Industrial Activity. In addition, in 2014 CAL OSHA adopted several new orders related to Electrical Safety, which will materially change our method of operations. We are also requesting reimbursement for costs of \$126,226 incurred in 2016/2017 due to these new regulations and will request an additional estimated \$137,500 for compliance equipment (Nortech has engaged a consultant to confirm this number). Nortech is also requesting an annual reimbursement, beginning FY 2017/2018, of \$199,185 for additional costs of compliance labor and equipment.
5. Nortech is requesting \$11,000.00 reimbursement for costs associated with the installation of new entrance gate controllers on Athens to WPWMA facilities, which has already been replaced.

Nortech has submitted information, summarized in Appendix A, requesting immediate relief in order to continue operating in compliance with the afore mentioned applicable laws and regulations. Costs presented going forward are our best estimates based on current data and will require establishing a methodology for adjustments in future operating years as regulations take effect, such as future minimum wage changes. Nortech looks forward to formalizing these discussions and we also appreciate working with you and your staff to better understand our requests.

Nortech believes that there may be better options for both parties to address additional compliance and regulation issues via contract amendments that would facilitate innovation and create real solutions that could potentially offset these impacts now and in the future.

Sincerely,



Stephanie Trewhitt  
President  
Nortech Waste LCC

Cc: P. Szura, B. Zimmerman, E. Oddo



Nortech Waste LLC				
Exhibit A				
Summary - based on County's Fiscal Year (July-June)				
		Relief on Note	Cash	During Interim from Jan. 1 - June 30, 2017
<b>Issues</b>				
<b><u>1. CARB Regulations</u></b>				
	2015 CARB Truck & Buss	802,700		
	2017-2019 CARB Truck & Buss		320,000	
	<b>Total</b>	<b>802,700</b>	<b>320,000</b>	
<b><u>2. Minimum Wage (MW)</u></b>				
	2014/2015	\$ 814,000	\$ -	
	2015/2016	1,149,000	-	
	2016/2017 - 1st 6 mos		588,000	
	2016/2017 - 2nd 6 mos			Add "MW Add On" of \$588,000 for 6 months to be billed monthly
	2017/2018 & thereafter			
	<b>Total</b>	<b>1,963,000</b>	<b>588,000</b>	<b>add'l \$588,000</b>
<b><u>3. C&amp;D Costs (excludes MW increase)</u></b>				
	2014/2015	Nortech to absorb cost		
	2015/2016	Nortech to absorb cost		
	2016/2017 - 1st 6 mos		332,000	
	2016/2017 - 2nd 6 mos			Calculate C&D tonnage at \$40.85/ton
	2017/2018 & thereafter			
	<b>Total</b>	<b>-</b>	<b>332,000</b>	<b>\$40.85/ton</b>
<b><u>4. Compliance</u></b>				
	Additional Compliance - Staffing, additional labor, training, signage, additional inspections, reporting, etc.		126,226	Add "Compliance Fee" of \$199,200 annually to be billed monthly to comply with new and ongoing Federal & State Regulations.
	Compliance equipment est. add'l		137,500	
				est. add'l \$199,200/yr
	<b>Total</b>		<b>263,726</b>	<b>est. add'l \$199,200/yr</b>
<b><u>5. Other</u></b>				
	Gate Cost		11,000	
	<b>Total</b>		<b>11,000</b>	
	<b>Grand Total</b>	<b>\$ 2,765,700</b>	<b>\$ 1,514,726</b>	



October 10, 2016

Western Placer Waste Management Authority  
Mr. Ken Grehm, Executive Director  
11476 C Avenue  
Auburn, CA 95603

**RE: CHANGE IN CIRCUMSTANCES**

Dear Mr. Grehm:

Nortech Waste respectfully requests an opportunity to discuss, per article 4.04 of the Second Restated and Amended Operating Agreement ("the Agreement") between Western Placer Waste Management Authority ("WPWMA") and Nortech Waste, LLC ("Nortech") "a change in circumstances" due to several requirements that have been mandated in Applicable Law and Environmental Law. These new requirements have materially altered Nortech's methods of operation and have materially increased Nortech's costs of performing under the Agreement. Nortech hereby requests a potential increase in processing fees and/or a contract extension based on four issues related to the Agreement:

1. On January 8, 2010 the Office of Administrative Law (OAL) approved Part 2 of the California Air Resources Board ("CARB") Statewide Truck and Bus Regulation. In order to comply with the new regulation, Nortech has been required to register its fleet through the state reporting program, and replace equipment before it has reached the end of its useful life. In 2010, Nortech began purchasing new diesel units and will continue to replace out of compliance units with new diesel units through 2022 in order to remain compliant with this regulation.
2. Legislative changes in California's minimum wage laws have mandated significant cost increases. Beginning in January 2007 increases in the minimum wage were mandated from \$6.75 to \$7.50 per hour. The State has continued mandated increases, raising the minimum wage to \$10.00 as of January 2016. This measure is scheduled to increase the minimum wage to \$11.00 per hour, effective January 1, 2017, and by \$1.00 each of the next four years, to \$15.00 per hour on January 1, 2021.
3. In 2014, the California Environmental Protection Agency and the State Water Resources Control Board imposed new requirements for the General Permit for Storm Water Associated with Industrial Activity. A major part of the new regulation has been enhanced minimum Best Management Practices ("BMP") and advanced BMPs to implement when Permit requirements are not met. These changes in allowable BMPs have markedly increased the costs for Nortech to be in compliance with the new requirements.

**NORTECH WASTE LLC**

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4. Unanticipated changes in the waste stream are significantly driving costs. An example of a change is over the last five years the amount of raw materials used to make certain products have decreased. This change has reduced the amount of plastic used to make a plastic bottle by over 50%. This has required Nortech to pick twice as many plastic containers to accumulate a ton. In conjunction with a lighter weight is the reduction in the price per ton due to significantly lower oil prices.

Nortech has analyzed the impacts of these regulations and issues. We believe that the best approach to partially minimize current and future impacts to both WPWMA and Nortech, is to request that formal discussions begin immediately to evaluate prior, current and future impacts and solutions to these regulations. We request the opportunity to discuss with the WPWMA the new technology we have been evaluating and work with the WPWMA now to find answers to these challenging issues that we face. We also want to understand the future goals of the WPWMA so that together we can implement solutions that will achieve those goals.

Throughout its contract Nortech has continuously reinvested in WPWMA's Material Recovery Facility (MRF) to improve its performance and efficiency. Nortech would like to continue to collaborate with WPWMA to improve the facility and keep the reputation of WPWMA's MRF as one of the most innovative and state-of-the-art facilities in the country. Please contact me to discuss how we can move forward on this request.

Sincerely,



Stephanie Trehitt  
President  
Nortech Waste LLC

Cc: Paul Szura  
Bill Zimmerman  
Eric Oddo

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## WESTERN PLACER WASTE MANAGEMENT AUTHORITY

Minutes of December 8<sup>th</sup>, 2016

The meeting of the Western Placer Waste Management Authority Board of Directors was called to order at 6:04 PM by Vice Chairman Joiner in the WPWMA Administration Building at the Materials Recovery Facility.

### Directors Present:

George Magnuson  
Paul Joiner  
Robert Weygandt  
Susan Rohan

### Staff Present:

Ken Grehm  
Bill Zimmerman  
Robert Sandman  
Eric Oddo  
Stephanie Ulmer  
Heather Wilden  
Keith Schmidt

1. Call Meeting to Order: Vice Chairman Joiner called the meeting to order at 6:04 PM.
2. Pledge of Allegiance: Vice Chairman Joiner led the Pledge of Allegiance.
3. Roll Call: Director Duran was absent.
4. Statement of Meeting Procedures: Heather Wilden read the Statement of Meeting Procedures into the record.
5. Agenda Approval:

### MOTION TO APPROVE THE AGENDA:

**Weygandt/Joiner**

**Vote: Unanimous**

6. Public Comment: Laura Rasmussen of Energy 2001 presented Chairman Magnuson with a commemorative plaque.
7. Correspondence: None.
8. Consent Agenda:
  - a. Second Amendment to the Agreement with Shaw/Yoder/Antwih, Inc. for Legislative Advocacy Services  
Staff recommended the Board authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign the Second Amendment to the Legislative Advocacy Services Agreement with Shaw / Yoder / Antwih, Inc. for a total cost of \$48,000, and increasing the total not-to-exceed cost of the Agreement to \$164,000.
  - b. Agreement with Cornerstone for Landfill Gas Operation, Monitoring and Maintenance Services  
Staff recommended the Board authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign an Agreement with Cornerstone Environmental Group, LLC for services related to the operation and maintenance of the landfill gas collection and control system at the Western Regional Sanitary Landfill for an amount not to exceed \$488,107.

### MOTION TO APPROVE THE CONSENT AGENDA:

**Joiner/Weygandt**

**Vote: Unanimous**

9. Announcements & Information:
  - a. Reports from Directors: None.

- b. Report from the Executive Director: Ken Grehm informed the Board of staff's intention to have Nortech perform additional work to install electrical power for the Module 5 sump pump for an additional cost totaling \$1,901.26.
  - c. Financial Reports: Eric Oddo summarized the report. There were no questions from the Board.
  - d. Monthly Tonnage Reports: Keith Schmidt summarized the report. There were no questions from the Board.
10. Action Items:
- a. Minutes of the Board Meeting held December 8, 2016:  
Staff recommended approving the minutes as submitted.  
**MOTION TO APPROVE ITEM 10a:**  
**Joiner/Weygandt/Magnuson**  
**Vote: 3:0**  
**Director Rohan abstained**
  - b. Election of Officers  
Staff recommended the Board elect officers for calendar year 2017. The Board elected officers as follows:  
Chair – The Director representing the City of Lincoln  
Vice Chair – Director Weygandt representing Placer County.  
**MOTION TO APPROVE ITEM 10b:**  
**Rohan/Weygandt**  
**Vote: Unanimous**
  - c. Resolution Commending Director Magnuson for his 23 Years of Service on the Western Placer Waste Management Authority Board of Directors  
Director Weygandt read the resolution into the record and presented Director Magnuson with a plaque commemorating his years of dutiful service to the organization, and another for his service as Chairman of the Board. Discussion ensued, and members of the audience offered sentiments and appreciation as well.  
**MOTION TO APPROVE ITEM 10c:**  
**Weygandt/Rohan**  
**Vote: Unanimous**
11. Upcoming Agenda Items: None.
12. Adjournment: Meeting was adjourned at 6:29 PM Adjourn to Social Hour to commemorate George Magnuson's service on the WPWMA Board of Directors.

Respectfully Submitted,



Heather Wilden, Clerk of the Board  
Western Placer Waste Management Authority

**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**                      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM / ERIC ODDO**   
SUBJECT: **CONDUCTING SOLID WASTE-RELATED PILOT STUDIES AT THE  
WPWMA'S FACILITY**

**RECOMMENDED ACTION:**

Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to: 1) enter into individual agreements with technology vendors or 2) provide the MRF or Landfill Operator with the necessary approval and authorization to engage with technology vendors for the purposes of conducting solid waste-related pilot studies at the WPWMA's facility.

**BACKGROUND:**

As part of the conceptual future uses of the WPWMA's facility presented to your Board on July 9, 2015 and subsequently used as the basis for the Master Planning and Environmental Services Agreement with CH2M approved by your Board on October 13, 2016, the WPWMA has identified the potential for hosting pilot studies of solid-waste related technologies that could serve to identify viable technologies to improve operations, increase diversion, reduce impacts (such as odors) on surrounding properties, or reduce operating costs.

The WPWMA was recently approached by a woody biomass technology vendor (All Power Labs) interested in citing a small gasification unit at the WPWMA's facility temporarily for the purposes of processing high hazard forest waste to generate electricity<sup>1</sup>. While the system was not originally designed to handle the types of wood recovered at the WPWMA's facility, preliminary conversations with the vendor suggest they are willing to test some of the WPWMA's wood as long as it generally meets their gasifier feedstock specifications. During the pilot study, all electricity generated by the gasifier will be provided to Nortech at no cost and used to offset electricity demand at the MRF, thereby providing a short-term utility cost savings to Nortech. If they system proves effective, is able to process the WPWMA's wood product and can reliably produce electricity at a competitive rate, staff will evaluate the use of one or more of these units at the WPWMA's facility to ensure a longer-term outlet for wood and to reduce utility costs.

Separately, Nortech has expressed interest in working with an equipment vendor that manufactures an advanced material reduction unit (a type of pulverizer mill) that could help to improve the processing of construction and demolition debris, reduce labor costs associated with the handling of these materials, and improve the marketability of certain products including wood, glass, concrete and rock.

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<sup>1</sup> All Power Labs' system is different in size, scale and design than the technologies reviewed as part of the Gasification Feasibility Study noted elsewhere in this package. Technical and economic viability of using the All Power Labs system at the WPWMA's facility would require a separate analysis, and may result in a different recommendation, than the conclusion made in the Gasification Feasibility Study.

To put the WPWMA into the best position to take advantage of these types of opportunities as they arise, staff recommends delegating authority to the Executive Director or designee to enter into separate pilot study agreements (or to allow and authorize Nortech to enter into such agreements) with the requesting technology vendor. As part of this process, staff would follow the following guidelines before proceeding with any pilot study:

1. There is a clear nexus between the technology or process being considered and the WPWMA's operations.
2. The proposed technology or process has the potential for improving the WPWMA's operations or reducing costs/generating revenue.
3. The vendor (or Nortech) has obtained the necessary regulatory approvals for operation of the proposed technology or process.
4. The technology vendor complies with the WPWMA's legal and insurance requirements.
5. There is no direct cost impact to the WPWMA.

Staff will provide updates to your Board as appropriate on any subsequent pilot study agreements and will provide a summary of the results of each pilot study upon its completion.

#### **ENVIRONMENTAL CLEARANCE:**

Entering into agreements and conducting these types of pilot studies are anticipated to be categorically exempt under CEQA Guidelines, Article 19, Section 15306 "Information Collection", which consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.

In the event that a proposed pilot study is not exempt under CEQA, staff will conduct the appropriate level of environmental review and return to your Board for approval before proceeding with the project.

#### **FISCAL IMPACT:**

There is no direct cost impact to the WPWMA associated with the recommended action.

**MEMORANDUM  
WESTERN PLACER WASTE MANAGEMENT AUTHORITY**

TO: **WPWMA BOARD OF DIRECTORS**                      DATE: **FEBRUARY 9, 2017**  
FROM: **KEN GREHM / ERIC ODDO**   
SUBJECT: **SOLE SOURCE AGREEMENT WITH CE SCHMIDT FOR ODOR  
RELATED MEASUREMENT AND TESTING AT THE WPWMA'S  
FACILITIES**

**RECOMMENDED ACTION:**

Authorize the Executive Director or designee, upon review and approval by WPWMA Counsel, to sign a sole-source agreement with CE Schmidt to conduct odor related measurement studies at the WPWMA's facilities for a cost not to exceed \$150,000.

**BACKGROUND:**

On July 9, 2015, your Board authorized the Executive Director (or designee) to enter into a sole-source agreement with CE Schmidt to develop updated odor emission factors for various odor sources at the WPWMA's facilities. The purpose of this effort was to update the WPWMA's continuous odor monitoring system to improve the system's accuracy and credibility. In their final report for the project, CE Schmidt noted that the WPWMA's composting operation represented nearly 70% of the overall site's odor potential and that composting odors could be substantially reduced by utilizing aerated static pile (ASP) composting techniques.

In October 2016, Nortech initiated an ASP pilot study to better identify if this technique would be operationally and economically viable for them to pursue and whether or not additional material streams (i.e.: foodwaste, soiled paper and MRF fines) could be co-composted with greenwaste to produce a marketable product. As this posed a unique opportunity for the WPWMA to evaluate whether ASP could substantially reduce composting-related odors, staff reallocated the remaining funds in CE Schmidt's agreement to allow for the necessary testing. The initial findings suggested that composting greenwaste using ASP techniques could reduce composting-related odor emissions by approximately 90 percent. While this study represents only one data point, staff believes it nonetheless could be a useful piece of information during the facility master planning efforts currently underway.

Building off of this opportunity in which the WPWMA was able to objectively and quantitatively evaluate the odor reducing impacts of changes to composting operations, staff believes it would be in the WPWMA's best interest to enter into a sole-source agreement with CE Schmidt to conduct similar odor-related measurement and testing on an as-needed or as-identified basis. By doing so, the WPWMA will be able to conduct site-specific odor impact/mitigation analyses of various project elements that may be identified during the facility master planning effort as well as objectively evaluate the effectiveness of other odor mitigation efforts undertaken by the WPWMA.

The resulting agreement is anticipated to initially include two tasks. The first task will consist of an evaluation of the effectiveness of various odor neutralizers (including the

neutralizer currently employed by the WPWMA) when applied directly to waste. This study will also determine the appropriate application rate of the most effective agent to best identify how the neutralizer should be utilized. Staff will be able to use this information to prepare a cost-benefit analysis of the continued use and application of odor neutralizing agents. The second task will represent a funding resource for any subsequent testing programs identified by staff. In these situations, staff will request a proposal from CE Schmidt to conduct the specified testing on a time and materials basis based on rates established in the agreement. Staff will provide updates to your Board as appropriate on these requested studies and the subsequent testing results.

**ENVIRONMENTAL CLEARANCE:**

All work performed under this Agreement is categorically exempt under CEQA Guidelines, Article 19, Section 15306 "Information Collection", which consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.

**FISCAL IMPACT:**

The not-to-exceed cost associated with conducting the odor related measurement and testing services under the proposed agreement is \$150,000. Sufficient funding is included in Account 2555 "Professional Services" of the FY 2016/17 Budget to cover this cost.